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ECONOMIC AFFAIRS

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CONTENTS

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

Use of Gross Output Indices Evaluated
(O. Antonov; TRUD, 13 Mar 83) 1

PLANNING AND PLAN IMPLEMENTATION

Defects, Possibilities of Existing Planning Indicators Discussed
(Z. Korovina; PLANOVOYE KHOZYAYSTVO, Jan 83) 7

Various Indexes for Measuring Plan Fulfillment Explored
(G. Kiperman; SOTSIALISTICHESKAYA INDUSTRIYA, 8 Feb 83) 22

INVESTMENT, PRICES, BUDGET AND FINANCE

Stimulative Role of Incentive Supplements to Prices
(V. Ye. Shalimov; VESTNIK MOSKOVSKOGO UNIVERSITETA, Nov-Dec 82) 26

Standardized Profit Distribution Discussed
(EKONOMICHESKAYA GAZETA, Feb 83; FINANSY SSSR, Oct 83) 37

Prospects, Problems, by G. Bazarova
Roundtable Discussion

INDUSTRIAL DEVELOPMENT AND PERFORMANCE

Economic Strides of USSR Summarized
(V. Negrutsa; PLANOVOYE KHOZYAYSTVO, Nov 82) 62

CSA Chief Summarizes Economic Progress
(L. Volodarskiy; VESTNIK STATISTIKI, Dec 82).................. 75

Use of Economic Levers for Improving the Work of Industry
(PLANOVOYE KHOZYAYSTVO, Feb 83) 87

REGIONAL DEVELOPMENT

Development Problems of Khabarovsk Kray
(A.K. Chernyy; EKONOMICHESKAYA GAZETA, Feb 83) 97

Siberian Industrial Development Lead Times Need Reduction
(V. Tumin; PLANOVOYE KHOZYAYSTVO, Oct 82) 102

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

USE OF GROSS OUTPUT INDICES EVALUATED

Moscow TRUD in Russian 13 Mar 83 p 2

[Article by O. Antonov, academician, general aviation designer, Hero of Socialist Labor, under rubric "Improving the Economic Mechanism": "What Instead of the 'Gross'?"]

[Text] In such a country as ours, with its tremendous natural resources, growing energy system, and single state plan, under the conditions of developed socialism, labor productivity is supposed to have grown at rates that were unprecedented throughout the world. But labor productivity "has been growing at rates which cannot satisfy us," as Yuriy Vladimirovich Andropov said in his speech at the Plenum of the CPSU Central Committee on 22 November 1982. What, then, has been hindering us?

For more than a quarter of a century I have been making suggestions for improving the quality of output. As a designer, I know that the improvement of the quality of output contains tremendous reserves for increasing the productivity of society's labor.

Apparently, not all our planners and economists have a sufficiently clear idea of that which we call "quality," or the role that it plays in our society, especially during the era of the scientific-technical revolution. Quality is the ratio of consumer value to value, that is, that which guarantees the greatest effectiveness of the article for society as a whole with the least expenditures of society as a whole. Failure to understand this is what leads to a situation in which quality has all the rights of a poor relative "living in the court of His Economic Highness -- quality."

Among a large number of characteristics of an article one must isolate the chief quality. For example, for metal it is strength; for a cutting tool, it is durability; for automobile tires, roadability; for a watch, accuracy; for engines, the rated operating time, that is, the amount of time for reliable operation; etc.

In improving quality, the person who has a direct self-interest is the customer, the recipient of the output, and when this pertains to consumer goods, the public. But as far as the enterprise that produces the particular kind of output is con-concerned, improvement in the quality of output does not give very much to it. Moreover, there are no bonuses that will turn the enterprise face to face with quality if that will lead to a disruption of the plan for quantity. Because, as everyone knows, the plan is issued in quantitative units: tons, meters, items, rubles, etc.

Our press is full of examples in which an enterprise director, the entire collective, and individual workers confront a dilemma that is inadmissible in a socialist society: should they work according to their conscience, produce good-quality output that is beneficial to society, but disrupt the plan that has been assigned by mechanical, dead indices; or should they go against their conscience and simply "give the plan"? Here is only one example. On the initiative of the workers and engineers of the Leniniskaya Kuznitsa Plant in Kiev, the weight of forged blanks was reduced, providing a considerable saving of metal. The labor-intensity of the forged pieces, naturally, increased. But the shop nevertheless fulfilled the delivery plan. However, the improvement of the shop's operation pulled the indices down, since, when making the complete settlement with the state, the shop had failed to fulfill its plan. Its plan in tons!

One of the most negative properties of a number of existing plan indices is the moral conflict that they create in production between the striving to fulfill the plan, the material incentives, and the worker's conscience. Nothing cools people off so much as the wasting of their labor and of values that have been created. Awkward indices can extinguish the most ardent enthusiasm and can shake loose the labor discipline. They hinder the imbuing in the workers of a communist attitude toward labor.

Indices of the production of output in rubles also contain within themselves a contradiction between the interests of the producers and the consumers. At the Dneprospetsstal' Plant, the metallurgist invented a steel alloy which was of a quality that surpassed the ordinary, standard alloy, and, in addition, the new steel proved to be cheaper than the previous grades. It would seem that one ought to rejoice and to try to give even more of this kind of output to the country. But no, the people at the enterprise do not know how to get rid of their innovation. The fact of the matter is that one of the basic indices in the activities of an enterprise is the value of the output that is sold. In order to recoup the same amount of money through stainless steel of the new grade, the enterprise must smelt more metal and expend more labor! One asks whether it makes sense for the plant to produce the good, inexpensive steel. Wouldn't it be simpler to make the expensive metal? Paradoxical as it sounds, the more expensive it is, the more profitable it is for the fulfillment of the plan! Planning in rubles is planning the waste of the nation's wealth.

Our planners and economists during the past 25 years have done practically nothing to eliminate the pernicious influence of the notorious "gross" [gross output] and other similar indices, because even the index of NChP [mormative net production] is not linked in any way with the quality of output.

It should have been realized long ago that indices expressed in tons, meters, rubles, etc., since the time when they ceased to be purely record-keeping, statistical values and began to be used for giving plans to various enterprises, have turned into autocratic dictators of production which do not heed the arguments of reason, or their conscience, or the insistences of the customer.

How, then, does one interest any enterprise in producing output of high quality that is beneficial to the customer, that is, in the final analysis, that is beneficial to the national economy as a whole?

General Secretary of the CPSU Central Committee, Comrade Yu. V. Andropov, at the November 1982 Plenum of the CPSU Central Committee, pointed out that "the unification of science and production must be promoted by methods of planning and the system of material incentives. It is necessary for those who are proceeding boldly forward in introducing new technology do not find themselves in an unprofitable situation."

In order to unleash the initiative of the enterprise administrators, it is necessary to change the methodology of planning so that the enterprise administrator wants to introduce, and can introduce not grudgingly but joyfully, the new technology without any detriment for production, for the collective, or for himself personally.

For this there is only one radical means -- the introduction of new socialist-type indices to replace the dead, mechanical ones, namely, the introduction of the "qualigross" ["*kvalival*"] and "qualiprice" ["*kvalitsena*"] (terms proposed by Academician A. G. Aganbegyan).

"Qualigross" and "qualiprice" are the gross and the price with a consideration of quality. Moreover, it is not simply the consideration of quality, but is an index which takes into consideration the quality and quantity of output by one and the same gauge. It makes, in planning, quality equivalent to quantity. In the general instance, the "qualigross" is expressed by the simple product of quantity multiplied by quality. If the plant produces output, for example, that is 20-percent more productive, that means that it fulfills the plan by 120 percent. If it is able to increase the durability of a cutting tool being produced by, say, 1.5 times and produces the same quantity of articles, that means that the enterprise has overfulfilled its plan by 1.5 times.

When we use these indices to assess the work of the enterprises, those enterprises will become extremely self-interested in improving the quality of the output being produced. They will fight with all their might to improve the quality, because the overfulfillment of the plan by means of an increase in quality -- productivity, durability, roadability, rated operating time -- will be more rapidly feasible than by means of purely quantitative output.

I would like to illustrate this by using an example that I recall from the work of the tire industry. What does it mean to increase the roadability of the tires by 10 percent, with the present volume of production? That is equivalent to the annual output of a large-scale tire plant, and this "output" will economize labor, materials, and the extremely scarce raw materials, valued at hundreds of millions of rubles.

Let us assume that two tire plants have an identical program -- 2 million tires a year. One plant has produced 2,100,000 tires and has fulfilled the gross plan by 105 percent, and the labor productivity plan by 103 percent, and has received accumulations of 5 million rubles. A tire produced by this plant has had a service life of 35,000 kilometers. The other plant has manufactured 2 million tires, has fulfilled the gross plan and the labor productivity plan by only 100 percent, and has received accumulations that are only half those of the first plant, but the average service life of its tires was 40,000 kilometers.

If one does not take into consideration the service life of the tires, it turns out that the first plant has better indices, and it is considered to be advanced. Actually, however, the second plant, which has produced 100,000 fewer tires, by actually working better has brought much greater benefits to the state, because the tires produced by the first plant last only 73.5 billion kilometers on the vehicles, but the tires produced by the second one last 80 billion. Thus, the second plant, which received 5 percent fewer materials, manufactured more output, since its tires have a service life that is 6.5 billion kilometers more than those of the first plant, and this is equal to the production of 162,000 tires. It turns out that the second plant, without any expenditures of labor or materials, has produced 262,000 tires in excess of plan. That is what fulfillment of the gross plan with a consideration of the tire service life looks like.

When the transition is made to the methodology of assigning the plan in the "qualigross" and "qualiprice," the superior organizations must limit themselves only to establishing for a prolonged period of time the proportions between quality and price. There is no need to be afraid of an uncontrolled price increase. The prices will be established on the basis of an understanding between the manufacturer and the customer, who will not agree to any increase in price if it is not more than enough to cover its production, during the fulfillment of his plan.

Let us take, for example, such an article as a bearing. A bearing of a definite standard size can, say, work 1000 hours in a motor vehicle or machine tool. If the situation in achieved in which it operates 2000 hours, half as many bearings are required. And in order to make twice as many bearings with the previous work capabilities, it is necessary to build one more plant, to expend high-alloy, expensive steel in a quantity that is twice as great, to double the expenditures of labor, energy, . . . It is more profitable to increase the durability then to take the path of increasing the quantity. The plan for the production of bearings should be given in "qualigross," that is, in the number of items in each standard size, multiplied by the number of hours of steady operation. And the same situation pertains to articles used in everyday life: refrigerators, vacuum cleaners, electrical appliances, television sets, etc.

If, for example, our television sets worked for 10,000 hours, the way the Japanese ones do, their production could be reduced to approximately one-third, and, consequently, the public's demand could be satisfied 3 times more quickly. Footwear should be planned in the number of pairs, multiplied by the expected period of wear, and the price should be planned in the "qualiprice," in which case there will not be such a massive amount of defective output as there is now. It is insulting to think that all the workers at shoe factories are sloppy. Here, as in many other instances, the fault can be found in the pernicious mechanical planning in the number of items, and in the prices that are established without an understanding of the situation.

Once the famous Zaporozh'ye Plant began producing new aircraft engines with an initial rated operating time of 400 hours. That is a modest rating, but it was acceptable to everyone for a beginning. That rating was sufficient for Aeroflot for approximately 3 months of operation, and then the engine had to be replaced by a new one. But the plant managers were not only outstanding engineers, but also keen economists. They coordinated at Gosplan a statute in accordance with which the plant, in exchange for increasing the rated operating time of the engine, received the right to get a slight increase in the price of the engine.

As far as I remember, when the rating changed from 400 hours to 1000 hours, the price did not increase 2.5 times, but by approximately 30 pecent. The plant collective got the opportunity to work intensively on the engine's rated time and quickly increased it to several thousand hours. The people at the Zaporozh'ye plant went even farther -- the increased the engine's rated time to 20,000 hours, and the country thus obtained a saving of 4 billion rubles.

Quality is the most dynamic category in economics. It is unprofitable for foreign companies to produce motor vehicles with an increased service life -- the market will soon be saturated, the demand will fall, and, consequently, so will the company's income. But for us, who live in a socialist state, this is extremely beneficial. A vehicle with a doubled service life will probably not cost half of a present one, but will save a tremendous amount of metal, energy, and worker hours!

The An-24 airplane originally had a rated time of 10,000 hours, or 10,000 flights. We worked constantly to increase that rated time, and kept observing how the plane was behaving in operation. We increased the rated time to 15,000, 20,000, and 25,000 flights, and now the rating is equal to 35,000 flights, which already is close to the best worldwide level. And what does that mean for an organization that operates our aircraft? Aeroflot orders one-third as many new aircraft, thus saving state funds.

However, the chief property of an aircraft, for the sake of which it is built, is its transportational capability, that is, its hauling capacity multiplied by speed. And that is what the plan should assign to the plant that produces transport aircraft -- an assignment in units of "qualigross": the cargo to be lifted, multiplied by the flight speed and by the number of aircraft that have been produced.

In this instance the plant would produce a smaller number according to the plan, but the aircraft would have a larger cargo capacity and would be faster, with smaller expenditures of metal, machine-tool hours, etc. But now the enterprise does not have a self-interest in changing over to a new and improved model, since the plan in number of items is not made dependent upon the quality of the output.

Computations have shown that a delay of 2 years in the introduction of a new aircraft modification will cost the state a loss of a half billion rubles and 500,000 tons of fuel.

The changeover from mechanical planning in tons, number of items, kilometers, rubles, etc., to planning in flexible units of "qualigross" and "qualiprice" will resolve three chief contradictions in our economy at the present stage:

1. It will facilitate and accelerate the introduction of new technology, making its introduction profitable for all enterprises.

2. It will make all the enterprise turn their chief attention to the customer, reconciling the interdepartmental interests.

3. It will create a harmony among the interests of the state, the collective, and the individual worker within the enterprise.

"Qualigross" and "qualiprice" are indices that correspond to the socialist nature of production. New technology would become a most welcome guest in production because it is easier to fulfill the plan by means of combining quality and quantity than by means of naked quantity. The designers of new technology, and inventors, would finally breathe more freely, since they would become the most welcome members of the collective. Their work would begin not to complicate the production, but would help to fulfill the plan.

An experiment could be begun at an individual enterprise and could then be transferred to the branch, and in the final analysis to the national economy as a whole.

The introduction into practice of the "qualigross" and "qualiprice" indices, of course, is not a panacea for our national economy, but they are capable, without any capital investments, of resolving a number of torturous questions in social production and of accelerating the increase in labor productivity.

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PLANNING AND PLAN IMPLEMENTATION

DEFECTS, POSSIBILITIES OF EXISTING PLANNING INDICATORS DISCUSSED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 1, Jan 83 pp 20-31

[Article by Z. Korovina, professor, doctor of economic sciences: "Methods of Planning and Incentives in the Industrial Sector: Shortcomings and Solutions"]

[Text] These successes of our economy are inseparably bound up with planning. Because of its importance it has occupied and does occupy the leading role in perfecting the economic mechanism and in solving the most important problems that face the country. Every news page of the country's development poses new problems and advances new requirements for planning. They are particularly great at the present time, in the period when the country, in implementing the decisions of the 26th CPSU Congress, is making the transition toward intensification and a steady rise of production efficiency. "Intensification of the economy and the rise of its efficiency, if this formula is translated into the language of practical affairs, consists above all in a faster growth for the results of production than for its costs, so that more can be obtained by committing comparatively smaller resources to production. Planning, scientific-technical policy and structural policy must be subordinated to solving this problem. The methods of conducting economic activity and policy in the management field must also work in favor of efficiency."[1]

Unfortunately, the observation must be made that such adverse occurrences of contemporary life as shortages and the low quality of a number of materials, machines and consumer goods, the long time required for new technology to be applied and assimilated and its low efficiency when it is, and mediocre growth rates of the efficiency of industrial production are related to shortcomings in planning and technical policy. It is with these manifestations in mind that we are attempting to continue the discussion of the problems posed by the editors of the journal PLANOVOYE KHOZYAYSTVO in connection with the upcoming drafting of the 12th Five-Year Plan.[2]

The published responses to the questions of the journal's editors and the other article[3] mainly take up individual aspects of planning: specifically improvement of the balance method of planning, devising the plan's normative base, the need to substantiate efficiency criteria and indices, improvement of computations of production capacity, etc. Without detracting from the importance of these and other planning problems, we still believe that the conditions for the economy's transition to a predominantly intensive development strategy require changes in planning which would make it possible to reorient the economy from quantitative to qualitative indicators and to instill in the collectives of industrial enterprises and production associations a motivation to accomplish this.

These changes are dictated above all by the impact which the present-day scientific-technical revolution is having on all economic processes and also by the augmented scale of production, the greater complexity of connections within the economy and the need to substantially raise the well-being of the people. "The revolution in science," it was observed at the 25th CPSU Congress, "requires major changes in the style and methods of economic activity, a resolute effort to combat inertia and routinism, true respect for science, and the ability and the desire to consult with it and take it into account."[4]

As shown by the research we have conducted, improvement is needed mainly in the methods of planning and stimulating industrial production at the level of the enterprise and association so that they meet the requirements of the stage of advanced socialism. Discussion of these methods presupposes clear-cut methodological positions. An analysis of these matters preceded the editors' "round-table" discussion. As for the problems of methodology, it should be noted that in its most general form methodology is the science of planning methods. Like any science, it includes a system of scientific principles and ideas which summarize practical experience and reflect the patterns of social development.

The scientific principles of planning and management were devised by V. I. Lenin (scientific soundness, compulsoriness, continuousness and stability of plans, proportionality in economic development, stimulation of personal and collective motivation, etc.). Each of them reflects some aspect of planning, and the measure of their use determines the effectiveness of the entire planning system. But the mechanism for using them in economic practice depends on the peculiarities and tasks of the specific stage of social development and the amount of scientific work that has been done on the given aspect of planning. For example, the "base" method of planning now in effect and the normative method can be used for scientific substantiation of plans. As for the normative method, it is based on individual (suitable only for the particular enterprise) standard rates and allowances pertaining to the use of raw materials, supplies, energy, labor, or consolidated and progressive sectorwide and uniform statewide standards and allowances.

Sound (scientific) methods and procedures for their practical realization are especially necessary now for successful application in economic practice of the profoundly scientific Leninist principles of planning and management, which have international importance. Scientific substantiation of plans (of their qualitative and quantitative indicators) presupposes that the requirements and tasks facing the country's economy and the specific branch of industry have been taken into account from every angle, that the main lines of development and the best methods of pursuing them have been defined, that achievements have been comprehensively analyzed and progressive know-how has been used. G. M. Krzhizhanovskiy has written: "I think that the science of planning, just like any other science, will grow up at the junction where workers of theoretical thought encounter the needs of practical activity. That is why when comrades tell me that planning methodology needs to be devised from scratch, I answer them: pardon me, but that methodology has already been devised in part, and its most 'scientific' part lies perhaps in that practical experience which the country has gone through."[5]

In substantiating the quantitative magnitude of planning targets the point of departure in economic practice is the base method of planning, in which the quantitative value of targets in the planning period is determined on the basis of the level already achieved in the reporting period and on the basis of the dynamic pattern that has taken shape. The achievements of collectives are evaluated as a function of plan fulfillment. This method performed its functions when the scale of production was small and enterprise development was stable, when the quantitative value of planning targets (level and growth rates of principal indicators) could be assigned to every enterprise by the superior organization. When the scale of production is huge and the scientific-technical revolution is developing at a fast pace, it is no longer any simple matter to make a sound determination of the quantitative value of the level and growth rate even of the principal indicators of the plan "from above." Under present conditions it is up to the enterprises themselves to draft the 5-year and annual plans from reference figures.

Insofar as all the "blessings" of the enterprise (sound financial condition, standing in competition, and bonus awards) depend on fulfilling the plan, to that extent those engaged in economic activity have an economic motivation to receive low planning targets. When the base method of planning is used, enterprises which have achieved comparatively high indicators in the reporting year prove to be in a less advantageous position than enterprises which have not fulfilled the plan. The base method and evaluation and stimulation of enterprise performance as a function of plan fulfillment do little to arouse collectives to adopt strenuous plans, to speed up introduction of new technology and to raise production efficiency. It is obvious that this method is imperfect. But the proposals which have been published do not correct the principal defects of planning.

The most work has been done on the proposal which involves calculating the strenuousness of plans and evaluating the performance of collectives so as to take the strenuousness of the plans into account. According to that proposal, the strenuousness can be determined with respect to one of the leading indicators (utilization of production capacity, labor productivity, the share of output in the superior-quality category, production cost) by dividing the value of the indicator plan by an assigned standard value of that indicator. It is proposed that that standard level be calculated on the basis of a system of progressive and scientifically sound technical-and-economic standards and allowances. It is assumed that the enterprise passport [record detailing production capacity] would be the point of departure for arriving at those standards.[6]

There have also been other proposals: in particular--for planning, evaluating and stimulating enterprise collectives on the basis of the level of indicators achieved (for the size of net profit), for improvement of the level attained against the basic targets of the 5-year period and by comparison with the reporting year, for adoption of counterplans, and so on. But in spite of a number of definite virtues, these methods, just like the base method, do not motivate enterprise collectives to speed up the application of new technology to production and to raise efficiency. In essence they orient collectives toward the level they themselves have already achieved and toward its improvement, as well as toward standards which have been worked out for the conditions of their plant. This leaves out such an important factor as the distorting influence on the level and growth rates of indicators of structural shifts in the mix of products with differing materials intensiveness.

A high level of indicators (for net profit in particular) and improvement of the level attained against the basic targets of the 5-year period and by comparison with the reporting year can be achieved not only through good performance of the enterprise collective, but also by increasing the proportion of materials-intensive and more profitable products, and also as a consequence of a low level of indicators in the base year.

Thus when evaluation and incentives are based on fulfillment and overfulfillment of plans drafted by the enterprise itself, the enterprise's initiative to adopt strenuous planning targets, to devise progressive standards, to plan high growth rates of indicators, and to adopt more strenuous counterplans would seem to run counter to the economic interests of enterprise collectives. The higher the plan, the more difficult it is to fulfill. However high the qualifications of economists and their civic responsibility, the drafters of the plan at the enterprise, taking into account their own interest and the interest of the collective, are economically motivated to adopt standards, a level of planning targets and growth rates of indicators whose fulfillment does not require great efforts or the discovery of all existing potential. They are also motivated to do so by shortcomings in material and technical supply and cases when new projects are activated before all the equipment has been furnished or construction has been completed.

"Interest," K. Marx wrote, "does not reflect, it calculates. Motives perform for it the role of numbers. The motive is an incentive to destroy legal foundations, and who can doubt that sufficient incentives will be found for this in the private interest?"[7] K. Marx was referring to capitalist production, but in a socialist society one cannot but take into account the separateness of individual, i.e., collective, and personal interests whose satisfaction is based on social production, and consequently, the interest of society, the interest of the state.

The entire system of planning will then work toward intensification of production and the rise of its efficiency when the very method (procedure) for substantiating the quantitative level of planning targets motivates the enterprise collective and every worker not to look at the results they have themselves achieved and which the enterprise itself has calculated "for itself," but to look to that progressive level which is possible given the most advanced technology and organization of production when the interests of individual workers and the enterprise collective are joined together with the interest of the entire nation.

Research we have done showed that as the economy makes the transition to an intensive development strategy and in view of the need for a substantial rise in production efficiency, the normative method of planning is the most progressive. Its introduction requires not individual plant standards for each type of raw material, supply or power per unit of each type of product, but consolidated sectorwide and statewide progressive standards and allowances product by product. They must be determined so as to take into account the most advanced technology and organization of production, proceeding from the potential capabilities embodied in the subjects of labor, the means of labor, and manpower, and taking into account the achievements of advanced enterprises in domestic and foreign industry.

These standards must be established by disinterested organizations under the supervision of a single center. The standard used for this purpose might be specific indicators of costs by types of resources, i.e., materials intensiveness, labor intensiveness and capital intensiveness, and with respect to the sum total of all costs--the production cost per unit of each type of product, taking into account its performance characteristics. Planning, assessment and material stimulation of enterprise collectives must at the same time be done as a function of how close the enterprise level has come to the level adopted as the standard:

$$i = \left(\sum_{i=1}^{n} Q_{i1} S_{in}\right) / \left(\sum_{i=1}^{n} Q_{i1} S_{i1}\right),$$

in which i--level of the enterprise's attainment of the standard level in the reporting period (or in the plan);
Q_{i1}--quantity of each product in the reporting period (or in the plan) in physical terms;
S_{in}, S_{i1}--unit production cost of each product on the basis of the standard and in the reporting (planning period).

At the same time this kind of calculation eliminates the distortive influence of structural shifts.[8]

The advantage of this method is that it will motivate any collective to achieve that progressive level of the indicators which is possible with the most advanced technology and organization of production, will make it possible to eliminate the influence of structural shifts, and with the help of the bonus system will put enterprise collectives in a position where they will be materially motivated to intensive production in order to attain the high progressive standard level. Every plant does not have to devise standards for itself and draft a strenuous plan. In any sector there must exist such standard rates and allowances which enterprises should strive for as a standard.

The drafting of consolidated sectorwide rates and standards will make it possible to reduce the amount of work required when every enterprise (there are about 50,000 of them) devises its own rates and standards for all products (there are more than 12 million of them in the country) relative to each type of raw material, supply, and energy, whose number runs from 5 to several dozen for each product. All of this will raise the scientific level of the rates and the standards and the entire system of planning and will make it possible to speed up implementation of the decree of the CPSU Central Committee and USSR Council of Ministers on improvement of planning which was adopted on 12 July 1979.

The method of drafting plans of enterprises (associations) has great importance in the planning system. This method has undergone continuous refinement over the entire history of planning. The recent methods[9] approved by USSR Gosplan incorporated new sections of the plan and new indicators (for production efficiency in particular), and the content of the number of sections of the plan which were previously separate has been improved. Under the conditions of the present-day scientific-technical revolution all sections of the plan should in our view be based on the achievements of scientific-technical progress, its quantitative impact on all aspects of enterprise performance and consequently on all sections of the plan should be taken into account. This means that the section of the plan on technical development must be carefully drafted in advance of the other sections and must be the point of departure for preparing all sections of the 5-year and annual plan.

However, the present section on technical development and the organization of production (and the same goes for statistical reporting on measures related to new technology) includes only 10 percent of the total amount of technology to be introduced. Nor is the effectiveness of new technology introduced through reconstruction, retooling and expansion of production planned or taken into account. Moreover, it is not the real annual economic benefit, but the hypothetical (calculated) benefit that is planned. The summary form of principal indicators of the plan (and the report) does not show the quantitative influence of the technology introduced on the principal economic indicators, among them the indicators of the benefit and production efficiency for the enterprise as a whole.

Now that 5-year plans have become the main link in planning, a definite uniformity of method is needed in the sections, forms and indicators of 5-year plans, annual plans and statistical reporting. But that kind of unity has not yet been achieved. The forms and indicators of the plans do not always correspond to statistical reporting. This means that fulfillment of certain indicators of the plan is not evaluated, and at the same time enterprise performance is evaluated according to indicators which are not in the plan.

The methods which have been devised by USSR Gosplan are not being sufficiently used at enterprises in a number of branches of industry, and a lack of coordination is noted in the forms and indicators of the plan. The problem of indicators for planning production efficiency can hardly be regarded as solved when the method proposes more than 50 different ones; they cannot furnish concrete ideas about the level of efficiency and the rates of its growth, since different indicators give different and not uncommonly opposite information. Since improvement of the method for drafting plans is regularly taking place, we can assume that these shortcomings have already been corrected to some degree in the drafting of the 12th Five-Year Plan.

The second question, a very important one, that has become a topic of the "round-table" discussion is that of the effectiveness of planning indicators. The indicators used in planning constitute the issue most under discussion in the system of planning. Over the last two decades they have been the subject of widespread discussion and a number of experiments that were conducted. The reason for this is both their exceptional importance to the theory and practice of planning and also the influence which the present-day scientific-technical revolution is having on the level and growth rates of social production. If the enterprise collective is to be assigned tasks, if their achievement is to be objectively evaluated and stimulated, they must first of all be correctly measured. The effectiveness of the entire planning system depends on the objectivity of measurement of the achievements of the enterprise collective. Moreover, high rates of product renewal, removal of outdated products from production and introduction of new ones--reconstruction and retooling of enterprises, and expansion of existing shops by activating large new unit capacities--all this tends to increase the proportion of products containing relatively high inputs of embodied labor, i.e., it tends to change the structure of output. Usually the distortive influence of structural shifts is used to explain the need to substitute for the indicators in effect indicators which supposedly eliminate that influence.

As pointed out, the search for the best planning indicators and universal planning indicators has gone on for more than one decade. At one time the normative value of processing was proposed as an indicator to replace the indicator of gross output, and then commodity output, marketed output, was put into effect, experiments were conducted with normative net output, with normative output and averaged profit, and other indicators.

As the research has been done and experiments conducted it has been obvious that some researchers find a sizable number of shortcomings in those indicators--net output, for example[10]--whose advantages have been convincingly argued by other economists.[11]

This situation is fully subject to explanation, since each of the indicators in effect or proposed for introduction has its virtues and shortcomings which influence in differing quantitative degree the reliability of indicators for measuring the particular aspect of the performance of the enterprise or association when the conditions of production are unequal. Many authors start out from purely logical assertions, without analyzing the concrete economic data, without making a quantitative assessment of the influence of the factors distorting the level and especially the rate of change of some indicators and not affecting others.

A method of analysis and quantitative assessment of indicators of enterprise performance has been developed in the Institute of Industrial Economics of the UkSSR Academy of Sciences. Experimental calculations have been made for specific industrial enterprises in different branches of industry over a 5-year period. It turned out that whatever indicators were used, there would always be some product that would be "advantageous" or "disadvantageous" for the enterprise. The reason for this is that one and the same magnitude of expenditures for materials, wages and depreciation to produce different products in one plant and at different plants yields sharply differing results (return) both on the basis of the volume of sales and total amount of profit and also on the basis of normative net output.

Table 1. Efficiency Per Ruble of Costs, in rubles

Indicator	Volume of Sales	Normative Net Output	Total Profit
Efficiency of Use of Material			
Severodonetsk "Azot" Production Association			
For the association as a whole	2.5	1.3	1.0
Confined to production of:			
Ammonia	2.8	1.2	0.95
Caprolactam	2.1	0.9	0.7
Donetsk Power Equipment Plant			
For the plant as a whole	2.9	1.9	0.4
Confined to production of:			
TKShVP substations, 180 kv-amp	1.8	0.8	0.1
AT-10 autotransformer	1.7	0.7	0.4
Efficiency of Use of Manpower (on basis of wages)			
Severodonetsk "Azot" Production Association			
For the association as a whole	15.4	7.7	6.0
Confined to production of:			
Ammonia	26.9	14.8	12.4
Caprolactam	15.4	6.9	5.0
Donetsk Power Equipment Plant			
For the plant as a whole	5.2	3.4	0.8
Confined to production of:			
TKShVP substations, 180 kv-amp	9.3	4.2	0.6
AT-10 autotransformer	13.5	5.5	3.1
Efficiency of Use of Fixed Productive Capital (on basis of depreciation)			
Severodonetsk "Azot" Production Association			
For the association as a whole	9.1	4.5	3.5
Confined to production of:			
Ammonia	11.0	6.1	5.1
Caprolactam	16.1	7.3	5.2
Donetsk Power Equipment Plant			
For the plant as a whole	33.5	21.9	5.1
Confined to production of:			
TKShVP substations, 180 kv-amp	61.2	27.7	3.8
AT-10 autotransformer	87.1	32.3	20.5

This is indicated by the figures in Table 1. Often the differing rate of benefit of one and the same product has a different direction from the standpoint of efficiency of utilization of the various elements of the production process. It should be especially emphasized that contrary to the widespread opinion unequal material intensiveness of the product is not the sole or even principal factor exerting the distortive influence on indicators of the volume of output and production efficiency in connection with a change in the structure of output. At many plants it is the differing profit intensiveness of the product that is that basic distorting factor.

Research has shown that to free indicators of the distortive influence of structural shifts resulting from differing materials intensiveness of the product one need not search for different planning indicators; it is sufficient to eliminate this factor's influence by calculating the index numbers of the structure, without spending large amounts of time and resources to search for indicators that do not exist and that when structural changes occur would be free of the distortive influence of differing materials intensiveness and also differing profit intensiveness, wage intensiveness and capital intensiveness of output.

An analysis which has been done allows us to draw the conclusion that it would be wise to improve planning by refining the determination of the indicators now in effect, i.e., the volume of sales, total profit, and the production cost by improving the system of price setting and the methods of calculating the production cost of the product. This effort toward improvement should be conducted along several lines at once, in close interrelationship with improvement of the methods for planning, evaluating and stimulating the performance of enterprise collectives.

Yet the question of the effectiveness of the indicators remains an urgent one. The essence of this urgency is to identify within the system of indicators now being used two or three basic indicators applicable to each branch that would orient enterprise collectives toward performing the main tasks confronting the entire economy and each branch of industry and would objectively reflect the level of their performance. The paramount task of enterprises in all branches of industry is to satisfy the needs of the economy and the public for goods of the highest quality. The volume of output in physical terms adjusted for the performance characteristics of goods and the volume of sales in value terms adjusted for fulfillment of the plan based on delivery contracts meet this requirement to a certain degree.

Planning agencies and branches of industry are paying a great deal of attention to physical indicators. There have been definite successes.[12] But physical indicators can and must be basic in the planning, evaluation and stimulation of the performance of enterprises in the raw materials and other branches of industry whose products are in short supply (petroleum industry, coal industry, timber industry, etc.). For enterprises serving the public, such as the footwear, garment and knitwear industries, physical indicators and the volume of sales adjusted for fulfillment of the plan for delivery contracts do not have any mobilizing significance at all. In fulfilling the sales plan every month enterprises of these branches are not satisfying the needs of the public, since they are manufacturing sizable quantities of products of low quality, out of fashion, products for which there is no public demand and which become stale in warehouses and on store shelves.

In the years of the first 5-year plans and in the postwar years the task was performed of simply putting clothes on people's backs and shoes on their feet. Today the task of satisfying the country's needs must be performed so as to take into account the higher level of sophistication of people who are demanding goods from light industry that are on the level of the best world examples. Yet several of our garment, footwear, knitwear and clothing accessory factories not uncommonly fulfill the plan by virtue of products which are not in demand.

The report address of the CPSU Central Committee to the 26th CPSU Congress noted that "probably the most important reason is that the power of inertia, tradition, and habit formed in the period when emphasis was not so much on quality as quantity has not yet been altogether overcome."[13]

Branches producing goods for the public ought to plan the development of production and their achievements ought to be evaluated according to the level of satisfaction of public demand for their products, that is, not according to the volume sold to the wholesale depot or delivered to the store, but the volume purchased by the public, combined with a strict record on the proportion of goods which are not in demand and have not been purchased. Under such conditions proceeds would be transferred to the enterprise's collection account only after the goods were sold. In this case it would not be advisable to include the volume of sales among the principal indicators, since in the drive to fulfill volume targets products of unsatisfactory quality are produced and then later marked down and written off.

A sharp rise in the efficiency of social production is the most important task facing the country's economy. "Emphasis on efficiency," the report address of the CPSU Central Committee to the 25th party congress pointed out, "--this needs to be spoken about again and again--is the most important component of our entire economic strategy."[14] If that task is to be performed, efficiency indicators must be among the basic indicators used in planning, evaluation and material stimulation of the workers for enterprises of all branches of industry. The essence of efficiency lies in a substantial increase in the volume of production and national income being obtained for every unit of inputs. Among the indicators which characterize the efficiency of production at enterprises are labor productivity, the profitability of production, costs per ruble of commodity output, etc. But the level and growth rates of these indicators for the enterprise as a whole are influenced to a considerable degree by the product mix and the relative share of profitable materials-intensive products. These indicators prove not to be comparable not only from enterprise to enterprise in one branch or different branches, but even within the same enterprise from one period to the next because there has been a change in the product mix involving products which differ in their benefit to the enterprise.

Given the continuous change in the technical level of enterprises and in the product mix, only the indicator of the production cost for each product is capable of objectively characterizing the level of efficiency achieved and of being comparable with that standard level which is possible given the most advanced technology and organization of production. On the whole it is advisable to compute for plants an indicator reflecting the degree to which the given enterprise has attained the standard level of production cost according to the formula given above for the index numbers of a constant product mix. In our view the role of the production cost as an indicator needs to be greatly enhanced. It is the reduction of the production cost for each product, adjusted for its performance characteristics, that reflects the rise of production efficiency.

The third question has to do with the interaction of the various parts of the planning system. We have already mentioned that the scientific principles of planning and the methods and indicators used in planning and evaluating the performance of enterprise collectives are closely related to one another. None of the parts of planning can be improved in isolation, but they must rather be improved in their close interrelationship and mutual conditionality.

In addition, there are problems which are usually taken up independently (and have a definite right to be taken up in that way), but which in their content are an inseparable component of planning. One of those most important components is the problem of economic incentives. In essence the soundest plan will prove unrealistic unless every worker and the entire collective of the enterprise is materially motivated to adopt high indicators in it and to fulfill and overfulfill its target and unless the monitoring of its fulfillment and financial liability for its fulfillment are organized.

Economic incentives occupy a particular place in the economic mechanism and in its improvement. As a component of the economic mechanism they are inseparably bound up with planning and consequently with attainment of the final results of production.

Theoretical substantiation of economic interests serves as the methodological foundation of the economic stimulation of industrial production. As a form in which production relations are manifested, economic interests are inseparably bound up with economic laws and above all with the basic economic law of socialism, the laws of distribution according to work and proportional development and the steady rise of the productivity of social labor. Since relations in the economy are manifested through people's economic interests, this has to be taken into account when the forms and methods of economic incentives and planning are being improved.

In the contemporary economics literature, when economic incentives are being studied as an economic category, an analysis is usually made either of the forms and systems of remuneration, i.e., the wage fund (and consequently wage networks, wage rates and the system of bonuses paid from the wage fund) or of the so-called economic incentive funds created by the 1965 economic reform, i.e., the FMP (material incentive fund), the FRP (production development fund), and the FSK i ZhS (fund for social welfare and cultural programs and housing construction). Without denying the very great importance and significance of the wage fund and each of the economic incentive funds which have been established, it should be noted that aside from these there are also other forms, methods and instruments for stimulation applied in economic practice which have received comparatively little study. Moreover, the number of forms of incentives and of bonuses in particular have been increasing regularly, and so far there are no limits on that growth. Specialists in different fields see it as virtually their duty to propose a new type of incentive (bonus, reward), say, for improvement of working conditions, for utilization of waste, for conservation of some scarce raw material, and so on.

As a result of such initiatives, which in our opinion are unsound, even today we have several dozen different forms, methods and instruments for stimulation. Use of an extensive set of forms, methods and instruments necessitates very large expenditures of the labor of engineering and technical personnel and employees to organize that work and to make the calculations. It diffuses the attention of the workers and engineers subject to bonuses under five or more regulations, detracts from the significance of each type of bonus and supplement and diminishes the material interest of each person and the entire collective of workers (of the shop, plant) in the results of production for which the various types of bonuses are paid, but, most important, it diminishes interest in achievement of the final results.

Bonuses and awards paid from the material incentive fund and other sources are made on the basis of the general performance indicators of the enterprise according to the results for the year and each quarter, for especially important assignments and for fulfillment of obligations on the basis of the results of intraplant, republic and all-union competition, and there are also bonuses for conservation of physical resources, fuel, electric power and thermal energy, for the output of products for export, for the collection, storage, sale and shipment of scrap and waste of ferrous and nonferrous metals, for the creation and introduction of new technology, for inventions and efficiency proposals, for improvement of product quality, and so on.

The large number of forms of bonuses for particular results of production which operate in isolation from one another and the small size of each of them have had the result that the sizable sum total of all bonus payments made, representing 40 percent or more of the total fund for remuneration, is not having a noticeable stimulating effect toward improvement of the final results of production. Research done to analyze the forms, methods and instruments of stimulation at enterprises in a number of branches of industry over the last 10-15 years is persuasive that bonuses are becoming a simple supplement to wage rates and salaries. Moreover, the growth rates of the size of bonuses for enterprises as a whole and for each worker are outstripping the growth rates not only of the indicators of efficiency, but in a number of cases even the growth rates of the volume of production. Table 2 gives figures by enterprises on the growth rates of indicators over the period 1965-1980, and for a knitwear association over the period 1976-1981.

In addition, there are in effect at industrial enterprises a set of forms and instruments for stimulating the development of production and for raising its technical level, including retooling, reconstruction and expansion. This is done with such funds and instruments for economic stimulation as the unified fund for development of science and technology, the production development fund, and they are also charged to profit and the production cost. The principles for forming and using the various funds are varied and complicated, although the sources from which they are built up are one and the same, as is their purpose: that is, development of production and raising the technical level of production by introducing new technology. The group of funds and instruments for stimulating an improvement of working conditions, living conditions and rest and recreation are not numerous, but they are varied in the principles governing their formation and the methods by which they are administered.

Table 2

(In percentage)

Indicator	Donetsk Machine-building Plant imeni LKSMU	Slavyanka "Khimprom" Production Association	Makeyevka Metallurgical Plant imeni S. M. Kirov	Mine imeni Zasad'ko	Krasnolimanskaya Mine	Donetsk Knitwear Production Association
Volume of gross output	187.20	437.20	175.60	403.00	239.20	122.17
Fund for remuneration of production personnel proper	159.20	187.40	148.00	484.50	174.30	115.94
Based on wage rates, salaries and piece rates	131.90	178.50	115.10	300.00	152.00	98.40
Bonuses of all types	376.90	224.10	142.70	2,961.30	178.70	192.10
Profitability of production	173.80	176.90	34.50	60.60	88.00	259.20
Labor productivity	191.90	351.10	211.60	196.70	208.90	124.80
Average wage of production personnel proper	163.26	150.46	159.14	247.42	152.20	120.53
Including all types of bonuses	386.53	179.97	171.46	1,442.06	156.10	200.23

The set of forms and types of financial work incentives is the most important of these types of economic incentives. This set is aimed at realizing the personal interest and personal motivation.

Given the economy's orientation toward intensification of production and toward increasing its efficiency, every person and all the workers have to be materially motivated to perform precisely these tasks by means of the forms, methods and instruments for stimulation. It would seem advisable to form and distribute all funds and resources for incentives and also for bonuses according to principles that would establish close dependence of the size and growth of all bonus payments on the final results of production and above all on the rise of production efficiency and the technical level of production, adjusted for the level of attainment of its standard level. This presupposes doing away with the numerousness of the bonus forms and instruments and creating on the basis of the incentive and bonus forms and instruments now in effect a single form that would depend on reducing the production cost by virtue of the increased total amount of profit. In this connection it would be advisable in our view to work out group norms reflecting the technical level of enterprises and the level of their attainment of the progressive standard level.

We objectively have all the conditions for the transition to planning and incentives based on qualitative indicators, above all based on reduction of production cost, which would be evaluated according to how close it comes to a standard level. But changing the methods of planning, of evaluating enterprise performance and of incentives requires overcoming not only inertia, traditions and habits, but also the resistance of those who have become accustomed to have undeserved bonuses and privileges.

FOOTNOTES

1. "Materialy XXVI s"yezda KPSS" [Materials of the 26th CPSU Congress], Moscow, Politizdat, 1981, p 40.

2. PLANOVOYE KHOZYAYSTVO, No 5, 1982, p 64.

3. PLANOVOYE KHOZYAYSTVO, No 5, 1982, p 9.

4. "Materialy XXV s"yezda KPSS," Moscow, Politizdat, 1978, p 48.

5. G. M. Krzhizhanovskiy, "Soch." [Works], Vol II, 1934, p 364.

6. "Sovershenstvovaniye khozyaystvennogo mekhanizma" [Improving the Economic Mechanism], collection of documents, Moscow, "Pravda," 1980, pp 37-38.

7. K. Marx and F. Engels, "Soch." [Works], Vol I, p 146.

8. For more detail, see PLANOVOYE KHOZYAYSTVO, No 3, 1980, pp 92-98.

9. "Tipovaya metodika razrabotki pyatiletnego plana proizvodstvennogo ob"yedineniya (kombinata), predpriyatiya" [Standard Method of Drafting the Five-Year Plan of the Production Association (Combine), Enterprise], Moscow, Ekonomika, 1975; "Tipovaya metodika razrabotki tekhpromfinplana proizvodstvennogo ob"yedineniya (kombinata), predpriyatiya" [Standard Method of Drafting the Technical, Industrial and Financial Plan of the Production Association (Combine), Enterprise], Moscow, Ekonomika, 1979.

10. P. Khromov, "On Net Output and Other Indicators of Labor Productivity," VOPROSY EKONOMIKI, No 5, 1976, pp 124-133; S. Barngol'ts, "Shortcomings of the Indicator of Labor Productivity Computed on the Basis of Net Output," VOPROSY EKONOMIKI, No 9, 1976, pp 113-122.

11. N. Rogovskiy and G. Kiperman, "Experience in Using the Net Output Indicator," VOPROSY EKONOMIKI, No 2, 1976, pp 108-117; Yu. Krotov, "Net Output: Experience and Solution," EKONOMICHESKAYA GAZETA, No 47, 1975, p 10.

12. "Problems in Improving the System of Physical Units of Measurement of Industrial Output," PLANOVOYE KHOZYAYSTVO, No 7, 1982, p 76.

13. "Materialy XXVI s"yezda KPSS," p 37.

14. "Materialy XXV s"yezda KPSS," p 43.

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7045
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PLANNING AND PLAN IMPLEMENTATION

VARIOUS INDEXES FOR MEASURING PLAN FULFILLMENT EXPLORED

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 8 Feb 83 p 2 (Kiperman)

/Article by G. Kiperman, doctor of economics, professor and sector chief of the Scientific Research Institute of Planning and Norms of USSR Gosplan: "Improve Plan Indicators"7

/Text7 The main tasks of the State plan must be fulfilled with every possible savings of material and labor expenditures. The November (1982) Plenum of the CPSU Central Committee pointed the way toward this: it is necessary to improve more rapidly the entire management of the economy, including, of course, the system of plan indicators, which help us in spending resources carefully.

Much as been accomplished following the widely-known decree of the CPSU Central Committee and the USSR Council of Ministers concerning improvements in the economic mechanism. In particular, the purposeful, consistent work by the economists of the Ministry of the Electrical Equipment Industry arouses great respect. For example, the ministry has come to make extensive use of what it calls parametric indexes, that is, indicators which reflect not only the quantitative aspect of items, but also their most important technical and economic properties.

The economists have managed to squeeze the gross output figures in many other sectors as well. Indicators expressed in tons are no longer dominant; for example, in the planning of machine and equipment production, the State plan has remaining only five to seven positions for which a "common denominator" has not been found. The ton is yielding its positions in the production of paper, too: more than one-third of paper output is already being planned in terms of area--in square meters. And soon the planningof four-fifths of this production will be done in this way. We already know about the real benefit: the volume of paper is being reduced, and the utiltization of raw materials has been improved.

However, by no means all ministries and agencies treat the work of improving natural indexes with the degree of responsibility which it deserves. Some of them are more interested in form than content.

Certain ministries, for example, have reduced the problem of improving the natural indexes to the mere substitution of value indicators for them.

The Ministry of Chemical and Petroleum Machine Building has been particularly successful at this. This ministry now plans in rubles all the product list positions which were measured in tons. Of course, planning the production of machinery and equipment in tons is the worst of all the possible alternatives. But the shift to rubles has not improved the situation very much--after all, the mass and price of machinery are closely related: heavier machinery is also more expensive, because the primary value-determining factor is the cost of the item. It turns out that in rubles, plan fulfillment for the product list looks tolerable, while the actual satisfaction of needs is not improving.

As a temporary solution, the substitution of value indexes for weight indicators is entirely justified. However, it looks as if the planning-economic office of this ministry (the office is headed by I. Mudragel') is inclined to view the start of this work as its conclusion. At least for now no further steps toward the real improvement of natural indexes have been undertaken here.

The example of the Ministry of Chemical and Petroleum Machine Building has proved to be infectious. Instead of looking for progressive natural indicators, other ministries are attempting to substitute rubles for them. This mechanical substitution will not yield anything good: the indicator will continue to reflect only one of several approximately equivalent properties of the product.

At the Ministry of the Machine Tool and Tool Building Industry the "item," which is a close relative of the notorious ton, now dominates. In combination with the leading parameter of the "unit" or the cost, calculation per item is completely suitable. But as the only indicator, as the Ministry of the Machine Tool and Tool Building Industry has adopted it, this groundless index of machine tool output creates very broad opportunities for maneuvering in reports on the fulfillment of targets: even at narrowly specialized plants, the labor intensity, as well as material intensity, of machine tools differs by a factor of several-fold.

Nor is the Ministry of the Chemical Industry hurrying with this work. And the chemical workers are affected by this problem of indicators no less than the machine tool builders. Tons are still being used in the planning of production for many industrial rubber items, motor vehicle carpets, technical-grade plates, insulation tape, man-made thread and polymer films. This, of course, does not meet the needs of consumers, who are interested in the quality of the items, not in their volume.

For example, planning the production of man-made thread in tons has a negative effect on the output of fine threads. And they are the ones which are in particular demand. Incidentally, there is a method of measuring in "ton-numbers" (a volume of thread is evaluated by its number, which is inversely proportional to its thickness: the finer the thread, the higher the number); this method has been tested in the textile industry. As a result of its use, the production of thread of any thickness becomes equally advantageous. However, for the chemical workers this indicator remains only a calculated index. The ton reigns. The existing situation suits the economists of the Soyuzkhimvolokno Association completely: fewer problems arise, and the work is easier.

For polymer films the arguments against changes are even thinner: the square meter has been used here for a long time as a calculated indicator, and it would not be very difficult to substitute it for the ton in places. It is hard to say whether the Ministry of the Chemical Industry is responsible for the shortage of films. But the "shortage" of persistence, initiative, and desire to improve matters is the responsibility of the ministry's economic office, and especially of its manager, V. Yevsyukov, and both deserve to be reproached.

It is clear that their colleagues in the building materials industry are also waiting for some new solutions: serious changes have not taken place in this sector. And there are quite a few unsuccessful indicators here. The main one is the notorious "cube." The larger the volume of an item, the better. It is another matter to ask for whom is it better. For the enterpriss which manufacture enormous reinforced concrete items, for the builders for whom this expensive "cube" makesit possible to "catch up" on volumes of construction and installation work? Yes. The State, however, is the loser. But there is the experience, which although it is not ideal, is nonetheless useful, of Glavmospromstroymaterialy /Main Administration of the Building Materials and Structural Parts Industry of the Mosgorispolkom/, which has planned the production of reinforced concrete in comparison cubic meters. But the building materials sector and the construction ministries prefer not to notice this.

It goes without saying that the introduction of new indicators into planning does not mean that the work to improve natural indicators is coming to an end. These indicators must be introduced into the standards and technical specifications, into the calculations of the norms and production capacities, the wholesale prices and norms for net output. Nor is the technical side of the problem any less important. After all, the discussion concerns the measurement of the physical properties of products. This means that instruments which measure these properties--length, width, thickness and others--right on the assembly line cannot be avoided. Until this technical problem is solved, the most correct economic indicators will not yield benefits.

Particular attention needs to be given to the planning of production and deliveries of products in complete sets and comprehensive forms. No matter how obvious are the advantages of complete deliveries, their proportion of the total is still not large and is growing slowly. What is the problem here? It is partly that the winner here is the national economy and the consumers, but at first glance, the producers see no advantages (although they do exist), but additional problems instead.

But the most significant problem is that the needs of the consumers still have not become law for the producers. It is the suppliers who determine what is a complete set. Although approved practice calls for the customer to participate in this, his opinion is frequently ignored in practice. Is it not time to reconsidere these instructions? It is clear that the principle of formal equality between contracting parties has not stood the test of time. The supplier retains the decisive word. It is clear that it would be more correct to proceed according to the principle of "inequality," to establish clearly that in questions of the composition and quality of output, as well as packing methods, the customer has the decisive word. Then there would not be such absurdities as the case of the Glukhov Cotton Combine, which stubbornly supplies yarn in nailed-up wooden containers, although all of their customers have requested delivery in soft packaging. And this is not a matter of whim: the weaving shops employ mostly women, and it is not convenient for them to fiddle with nails, pliars and nail pullers.

I think that the well-known rule "the customer is always right" applies not only to commerce, but also in equal measure to the relations between the supplier and the organization placing the order. The time has come for USSR Gossnab to define for every ministry the percentage of output which must be supplied only in complete sets or final form (from 10-20 percent approximately) in order for the actual proportion of complete-set deliveries to be brought up to the calculated figure over a period of time, say five years. And with their real and considerable authority, the supply organs could ensure the correct prioritization of the interests of those who receive the output.

8543
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INVESTMENT, PRICES, BUDGET AND FINANCE

STIMULATIVE ROLE OF INCENTIVE SUPPLEMENTS TO PRICES

Moscow VESTNIK MOSKOVSKOGO UNIVERSITETA in Russian No 6, Nov-Dec 82 (manuscript received 5 Nov 81) pp 45-53

[Article* by V. Ye. Shalimov]

[Text] Improvement of the pricing of new technology is a decisive direction in pursuing the further development of economic management of production of high-quality products which has been outlined by the party. The function of the price in stimulating scientific-technical progress lies above all in distribution of the economic benefit accruing to the national economy from new technology between manufacturing enterprises and consumers. By means of a built-in mechanism of incentive supplements and reductions it is the price which is supposed to guarantee that enterprises manufacturing and using new technology receive appropriate quotas (parts) of the economic benefit realized in the national economy. At the same time we should note that certain theoretical and practical problems concerning calculation of the size of incentive supplements and the planning and recording of the additional profit obtained by the manufacturers of new technology still remain largely unsolved and are in need of further consideration.

In the economics literature, for example, and correspondingly in the practice of the economy, there is in essence no unified theoretical conception of the price structure for new technology that would take into account its effectiveness. For example, according to one of the positions the wholesale price of new technology and the size of the incentive supplements must be essentially determined by the relationship between its supply and the demand for it. For example, V. M. Gal'perin writes: "If a new product is not scarce ... then the wholesale price is set at the level of its lower limit.... Yet if the new product is scarce ... then ... at a level close to the upper limit of the price in the least effective of the spheres using the new product...."[1] We should note that such prices do not solve the problem of stimulating faster production and widespread application of new technology. In the case of the production of a product that is not scarce, the manufacturer does not have the necessary incentives for putting it into production and manufacturing it, since he is guaranteed reimbursement of production costs and sales costs, and also the earning of no more than the standard rate of profit. At the same time, in the production of a scarce product conditions are ensured for application of new technology only in the highly effective spheres, i.e., the boundaries of its application in the sectors of the economy are artificially narrowed. It is obviously inadvisable to apply such prices when efforts are being made to solve the problem of the dynamic and balanced development of all the sectors of the economy.

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Some economists propose in connection with setting prices of new technology that the net income be distributed so that the shares received by the producers and consumers of the new technology bear approximately equal relationship to the additional costs incurred.[2] We believe this is a sounder point of view.

But the proponents of the viewpoints examined essentially ignore the most important functional role of the distribution of the economic benefit, which consists of combining the contradictory interests of producers and consumers of new technology. Conditions which stimulate the production and application of new technology cannot be created either as a result of registering supply and demand or from the additional costs incurred by manufacturers and consumers, much less by guaranteeing the actual profitability occurring for the analogous product that has been put into production. Obviously such conditions can be guaranteed only by that distribution of the economic benefit to the national economy which guarantees a successive dropping of prices of new technology per unit of the useful result obtained from it and the realization of additional profit only by virtue of a real saving on costs.[3] Thus distribution of the economic benefit between the producers and consumers of new technology (establishment of incentive supplements) is an adjustable process whose point of departure is a certain relationship between the economic benefit and the price.

The decree of the CPSU Central Committee and USSR Council of Ministers dated 12 July 1979 outlines a set of interrelated measures for enhancement of the role of economic instruments and incentives in expanding the output of products of high quality and in guaranteeing regular updating of the product mix. Among the economic incentives expected in this connection to operate toward faster and broader production of new technology, the most important role is attributed to incentive supplements to wholesale prices of highly effective new products and price deductions on those products which have become obsolete.

Incentive supplements to wholesale prices of highly effective new products for production and technical purposes which meet the parameters of the best domestic and foreign standards, are established as a function of the annual economic benefit from the manufacture and use of that product by applying a factor between 0.5 and 1.25 to the standard rate of profitability adopted in setting the prices for the given product group or an analogous profit group, but not to exceed 70 percent of the amount of that benefit.[4] Thus two constraints are imposed on the size of the incentive supplement to the price for highly effective new technology. First, the size of the additional profit envisaged in prices in the form of the incentive supplement (N_p) may not exceed by more than 25 percent the size of the standard profit (P_n) and may not amount to less than half of the latter, i.e.,

$$0.5P_n \leq N_p \leq 1.25P_n.$$

Second, no more than 70 percent of the economic benefit may be credited to the manufacturer of the new technology on the basis of the incentive supplement, i.e., $N_p \leq$ 70 percent of E. The size of incentive supplements in each concrete case are differentiated as a function of the relationship between the economic benefit (E) and the wholesale price (Ts_{op}) of the new product on a standard scale (Table 1).

Table 1

Relationship of Economic Benefit to Wholesale Price in Percentages ($E:Ts_{op}\cdot 100$)	Size of Incentive Supplement Relative to Normative Profit in Percentages: For Attainment of Minimum Boundary of Interval	Size of Incentive Supplement Relative to Normative Profit in Percentages: For Each Percentage Point Within Interval
15- 35	50	0.20
35- 55	54	0.25
55- 75	59	0.30
75- 95	65	0.35
95-115	72	0.45
115-135	81	0.60
135-155	93	0.75
155-175	108	0.85
175 or more	125	--

At the same time the decree mentioned primarily envisages stimulating fundamentally new technology. For instance, the size of the supplement to the wholesale price for a highly effective new product which has been awarded the state Quality Emblem may be raised 1.5-fold if production of that product is based on developments duly recognized as discoveries or inventions. Obviously this kind of differentiation in the size of the incentive supplement as a function of the newness and effectiveness of the technical solution is economically justified. If the certified highly effective product is again awarded the state Quality Emblem, provided there has been an improvement in its technical and economic parameters, the size of the incentive supplement established remains unchanged. If the performance characteristics of this product do not improve, it is reduced to half.

An important peculiarity of this procedure for awarding incentive supplements to enterprises is the dependence of the differentiation of the size of the additional profit on the specific effectiveness of the new technology ($E:Ts_{op}$). The method for determining the incentive supplements to wholesale prices of new products for production and technical purposes, which has been in effect since 1974, recommended that the relationship between the upper and lower limits of the price be taken as such an indicator. We should note that the difference between these limits represents for the enterprise which is manufacturing the new technology the absolute size of the economic benefit to be distributed. To compare them by division is an artificial operation which has nothing to do with determining the effectiveness of the new technology.

The procedure in effect is sounder, since differentiation of the size of incentive supplements is related to an indicator reflecting the actual effectiveness of the new technology to which the incentive applies. Use of the specific effectiveness ($E:Ts_{op}$) of new products as such an indicator is considerably more consistent than use of the relationship between the upper and lower levels of the price. But successful solution of this problem also requires relating the size of the incentive supplement to the absolute value (amount) of the economic benefit from the new technology obtained by enterprises (associations), and not to its relative expression.

An analysis of the system of incentive supplements to prices of highly effective new products for production and technical purposes,[5] which has been in effect since the end of the 10th Five-Year Plan, has shown that it has essential shortcomings and contradictions which are inherent in it. First, experience in using this method has shown that an unjustifiably small portion of the economic benefit is realized in the form of the incentive supplement (credited to manufacturing enterprises and the developers of the new technology) (Table 2).

Table 2. Relative Share of Incentive Supplements in the Economic Benefit (%) at Electrical Equipment Enterprises

Indicator	1972	1973	1974	1975	1976	1977	1978	1979	1980
Of the economic benefit to be distributed	6.0	6.1	7.0	7.2	6.7	6.6	6.9	7.7	8.1
Of the economic benefit to the national economy	5.1	5.2	6.0	5.3	4.8	4.6	4.7	5.1	5.9

It is evident from these figures that in the electrical equipment industry, for example, the additional profit (cost-accounting [khozraschet] benefit) obtained by enterprises which are the manufacturers and developers of the new technology amounts to only between 6 and 8.1 percent of the economic benefit for distribution. The size of the incentive supplements obtained by the enterprises which are the producers proves to depend little on the absolute size of the economic benefit from the new technology.

We should note that these shortcomings and contradictions also extend in full measure to the system of incentive supplements introduced by the Guidelines on Procedure for Establishment of Incentive Supplements ..., adopted in 1979. This conclusion is based on the methods unity of the official methods discussed (Table 3).

As is evident from Table 3, when the economic benefit of new technology is being distributed between manufacturing enterprises and consumers the official methods analyzed use two identical factors (limitations) which have only a certain quantitative difference. In accordance with the first constraint, the size of the incentive supplement turns out to be closely related to the absolute size of the standard profit, the price, and ultimately the costs of manufacturing enterprises to produce the new technology. As a result a more expensive new product directly ensures enterprises manufacturing new technology that they will receive a large total amount of incentive supplements (additional profit). It is natural that enterprises (associations) turn out not to be interested in developing and manufacturing highly efficient new technology.

Table 3. Comparative Analysis of the Method of Establishing Incentive Supplements

Method of Determining Wholesale Prices of New Products for Production and Technical Purposes	1969	1974	1979 (Guidelines on Procedure for Establishment of Incentive Supplement ...)
Indicator of effectiveness on which differentiation of the size of the supplement depends	--	$Ts_{vp}/(Ts_{pp}+Z_{on})$	E/P_{op}
Quantitative limitations (percentages) of the size of the incentive supplement (N_p) as a function of the following:			
Standard rate of profit (P_n)	$N_p \le 50P_n$	$20P_n \le N_p \le 100P_n$	$50P_n \le N_p \le 125P_n$
Economic benefit (E)	$30E \le N_p \le 50E$	$N_p \le 50E$	$N_p \le 70E$

In accordance with the second constraint the size of the incentive supplement obtained by the manufacturing enterprise is placed in a certain dependence on the size of the economic benefit of the new technology.

But an analysis of the functioning of the incentive supplement shows that the first constraint (on the size of the standard rate of profit) turns out to be considerably more strict in practice for a majority of products than the second (on the size of the economic benefit). As a result the restriction concerning the economic benefit as a rule has no meaning when incentive supplements are being established.

Economic theory and economic practice have accordingly taken as their point of departure the need to increase the size of incentive supplements relative to the standard rate of profit. We should note that expanding the opportunity for recording more soundly the size of the economic benefit in connection with determining the incentive supplement is in essence directly dependent upon the maximum level relative to the standard rate of profit. For instance, in the Method of Setting Wholesale Prices of New Products for Productive and Technical Purposes, which was published in 1969, the maximum size of the incentive supplement was limited to 50 percent of standard profit, i.e., $N_p \le 0.5P_n$.

Given this restriction, there was practically no possibility of devising and applying any sort of differentiated scale for determining the size of incentive supplements, and it was merely provided, then, that "the economic benefit (E_r) is distributed in such a way that as a rule the manufacturing enterprise will be credited between 30 and 50 percent of that economic benefit to increase the profitability of the new product."[6] The Method ... published in 1974, which increased the maximum proportion of the supplement to 100 percent of standard profit, i.e., $N_p \leq P_n$, made it possible to devise and apply a differentiated scale consisting of nine intervals.

But in spite of a certain purposiveness and practical importance of broadening the restriction on the size of the incentive supplement imposed by the proportion of standard profit, for example, to double the standard rate of profit, we should point out that this method has a patent practical limitation and theoretical unsoundness.

The practical limitation of this method of improving distribution of the economic benefit from new technology between manufacturers and consumers lies above all in the fact that regulation of the size of the incentive supplement by the size of standard profit still has the determining and dominant role. For instance, when the maximum size of incentive supplements relative to standard profit is raised from 50 to 100 percent, the size of the additional profit (supplements) also approximately doubles relative to the economic benefit, but it has amounted to only 6-8 percent; that is, in practical terms the value cannot be compared to the maximum restriction on the benefit--50 percent. Given the uniformity as to methods of the Guidelines on Procedure for Establishing Incentive Supplements ... (1979) with the methods published in 1969 and 1974 which we have discussed, changing the maximum limit on incentive supplements relative to standard profit from 100 to 125 percent (Table 3) results in increasing the share of the supplement relative to the economic benefit only to 10-12 percent approximately. Thus we can suppose that when the new procedure takes effect, the influence of the economic benefit on the size of incentive supplements obtained by enterprises manufacturing new technology will still remain secondary, subordinated to the influence of the first factor, i.e., standard profit. Yu. V. Borozdin speaks quite soundly about the possibility of increasing "the rate of incentive profit from half of the standard ($0.5R_n$) to the entire rate (R_n) combined with reducing the share of the economic benefit to be distributed to the manufacturer's advantage from 30-50 to 5-10 percent."[7] Only if this kind of quantitative relationship were established, would the two constraints on the size of the incentive supplement (relative to the profit rate and to the size of the benefit) have a certain meaning for the overwhelming majority of new technology.

An attempt to place the size of incentive supplements in the necessary (more substantial) dependence on the economic benefit will face us with the problem of expanding the limit on the size of additional profit to several times (7-10-fold) the standard rate of profit. Practical realization of this method of improving determination of the size of incentive supplements in order to enhance the role of the economic benefit of the new technology in this process is, of course, hardly possible. The practical constraint on expanding the limit of regulation of the size of incentive supplements by the size of the standard rate of profit is one aspect of the problem of improving the distribution of the economic benefit of new technology between its manufacturers and its consumers.

The other aspect is the theoretical soundness of the method used to place the size of the supplemental profit in a certain dependence on the size of the standard rate of profit. At the present time the critical position concerning the relationship between the size of incentive supplements and standard profit is becoming more and more widespread. The basic condition for achieving material motivation in socialism is to establish a cause-and-effect relationship between the size of the incentive and the end results of the process being stimulated. In this case the incentive measure is the size of the incentive supplement to the wholesale price. The end result of the process being stimulated--the process of production and application of new technology--is the increase in the quantity of use values in the sphere of consumption. But a direct comparison and commensuration of use values is impossible. This process must obviously take place indirectly.

Recording, evaluating and comparing the final results of the production and application of new technology are possible only on the basis of the economic benefit to the national economy. This indicator is a sufficiently accurate and convenient basis of value relations. Giving it this functional role is consistent with F. Engels' proposition to the effect that the movement of resources in the new society "will ultimately be determined by weighing and comparing the useful benefits of various consumer goods with one another and with the quantities of labor necessary to produce them."[8] In this connection we should point to the dialectical relationship between the use value and the benefit to the national economy, since the latter is essentially the socially beneficial result of the labor expended to produce the new technology, expressed in value terms. Thus by advancing the indicator of the economic benefit to the national economy as the final result of the production and application of new technology, we are not setting it up in opposition to use values in the sphere of consumption. In that position the economic benefit to the national economy is quite naturally being set up in opposition only to the exchange value--a category that lies outside the sphere of the final results of socialist production.

Treatment of the economic benefit to the national economy as the final result of scientific-technical progress has received the needed substantiation in the theoretical writings of Soviet economists.[9] This conception of the final results of the production and application of new technology has been theoretically substantiated and justified in practical terms in the respective stage of discussion of the "research--production" process. With that theoretical position as the point of departure, the proposal concerning the need to establish a close relationship of the size of incentive supplements with the absolute values of the economic benefit to the national economy must be seen as logical. Consequently, scales for determining the size of incentive supplements must be structured on the basis of a dependence solely on the size of the economic benefit of the new technology. The relationship between the economic benefit and the wholesale price must be retained as the condition (indicator) in differentiation of the proportion of the incentive supplements to the economic benefit, in percentage. In connection with the method proposed for calculating incentive supplements, this relationship takes on especially great importance, since it becomes fundamental for devising the relevant scales of the supplements. Actual data on the relationship between the economic benefit and wholesale prices of, say, electrical equipment determine the necessary requirements for establishment of incentive supplements. First of all, for 9 of the 12 groups of electrical equipment considered the minimum values of the relationship of the economic benefit and the wholesale price are between 5 and 10 percent. Obviously the incentive supplements to the prices may be established only on products whose specific effectiveness (relationship between the benefit and the price) is at least 15 percent. Thus all product groups should have the same lower level of effectiveness beyond which it is advisable to pay the incentive. When the relationship between the economic benefit and the wholesale price is less than 15 percent, the question of establishing the incentive supplement should be taken up by pricing authorities in special proceedings.

Second, in discussing the maximum values of the relationship of the economic benefit to the wholesale prices we should note that they are differentiated rather substantially from one product group to another. For instance, for electric welding equipment this indicator exceeds by more than 16-fold the maximum "specific" effectiveness of power transformers. Third, the maximum values of the relationship of the economic benefit to wholesale prices ranges from 240 to 2,300 percent for the 9 groups of electrical equipment, which exceeds many times over the corresponding maximum value of effectiveness envisaged by the standard scale in compliance with the Guidelines on Procedure for Establishing Incentive Supplements ... of 1979. Given these circumstances, scales of incentive supplements must be differentiated by product groups depending on the maximum values of the relationship between the economic benefit and the wholesale price.

Table 4. Sample Scale (Scheme) of Incentive Supplements to Wholesale Prices on Electric Welding Equipment

	Ratio of Incentive Supplement to Economic Benefit in Percentages	
Relationship of Economic Benefit to Wholesale Price in Percentages ($E:Ts_{op}\cdot 100$)	On Reaching Lower Boundary of Effectiveness Interval (n_i)	Reduction for Each Point Within Interval (k_i)
30- 200	48.69	0.2400
201- 500	7.87	0.0157
501- 800	3.40	0.0042
801-1,100	2.28	0.0020
1,101-1,400	1.77	0.0012
1,401-1,700	1.47	0.0008
1,701-2,000	1.29	0.0006
2,001-2,300	1.15	0.0005
Over 2,300	1.02*	

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* But not more than twice the standard rate of profit.

These differences in the level of effectiveness of different product groups are objectively imposed, and that makes it legitimate to differentiate scales of incentive supplements correspondingly. An analysis of the initial data shows that for the 12 most important groups of electrical products, for instance, it is advisable to work out 10 differentiated scales of incentive supplements (i.e., for electric lighting fixtures, cable products and electrical insulation, taking into account that the values of specific effectiveness and the standard rate of profit are close, use of a single scale is proposed). Table 4 gives a hypothetical example of the proposed differentiated scale (scheme) of incentive supplements to wholesale prices for electric welding equipment.

Thus in the scale proposed the ratio of incentive supplements to wholesale prices of highly effective new products has been made dependent only on the absolute size of the economic benefit realized from the production and use of that technology in the national economy. The relationship between the economic benefit and the wholesale price ($E:Ts_{op} \cdot 100$) is the condition for differentiation of the size of incentive supplements relative to the absolute benefit, in percentage.

But certain authors, while essentially acknowledging the theoretical legitimacy of the dependence of the "size of profit taken into account in prices of new technology ... on the size of the benefit to the national economy,"[10] as a practical matter make objections to the method proposed for calculating the incentive supplements. For instance, Yu. V. Borozdin asserts that "it would be incorrect to remove one of the limitations in the system of distribution of the economic benefit between the manufacturer and the consumer, leaving only one criterion ... the total amount of the benefit," supporting this with the sole argument that the total level of profitability could in certain cases run to tens and hundreds of percentage points, and control of the price level would be lost.[11] This position is only partially found. As shown with the example of the proposed scale of incentive supplements, as a practical matter it is possible for most new products to use the economic benefit as the sole indicator on which calculation of the size of the supplemental profit credited to the enterprise manufacturing new technology is dependent. As for certain products with especially high effectiveness and for which the relationship of the economic benefit to the wholesale price exceeds the maximum values envisaged by the scales, in this case the direct restrictive effect of the standard profit is actually necessary. But even in this case the standard profit does not determine the size of the incentive supplement, but only serves as its upper limit.

The economic mechanism of incentive supplements to wholesale prices of highly effective new products which is now in effect does have a certain stimulative effect on the processes of creating new technology, putting it into production and continuing to produce it. The incentive supplements to be obtained by manufacturing enterprises prove to have an appreciable influence on the dynamic pattern of the most important cost-accounting indicators and figure as one of the basic sources for formation of the economic incentive funds of scientific research institutes, design bureaus, and production associations (enterprises). But the effectiveness of the economic mechanism of incentive supplements is essentially diminished because of the weak relationship between the size of the additional profit received by enterprises manufacturing new technology and the economic benefit of that technology. The problem at the present time, then, is not increasing the absolute size of incentive supplements, but in making them dependent in real terms solely on the higher technical and economic parameters of the new technology which are affording a real economy of social costs.

The proposed method (differentiated scales) of calculating incentive supplements to wholesale prices of highly effective new technology and products bearing the state Quality Emblem, under which the size of supplemental profit is determined in shares (percentage) of the economic benefit regardless of standard profit, is one of the possible ways of solving this important problem. The proposals presented help to establish a close correlation between stimulation of the production of new technology and the end results of scientific-technical progress for the national economy, the real economic benefit achieved in the national economy.

FOOTNOTES

1. V. M. Gal'perin, "On the Upper Limit of the Price of New Technology," in the book "Tsena i khozyaystvennyy raschet v sisteme upravleniya sotsialisticheskoy ekonomikoy" [The Price and Cost Accounting in the System of Managing a Socialist Economy], Leningrad, 1975, pp 122-123.

2. "Nauchnyye osnovy planovogo tsenoobrazovaniya (teoriya, metodologiya)" [Scientific Foundations of Planned Pricing (Theory, Methodology)], edited by V. P. D'yachenko, corresponding member of the USSR Academy of Sciences, Moscow, 1968, p 279; "Ekonomika osvoyeniya novoy produktsii" [The Economics of Putting New Products Into Production], edited by F. A. Dronov and M. N. Shatokhina, Minsk, 1970, p 177; "Nauchno-tekhnicheskiy progress i effektivnost' obshchestvennogo proizvodstva" [Scientific-Technical Progress and the Efficiency of Social Production], Moscow, 1972, p 49; "Khozraschetnyye faktory uskoreniya tekhnicheskogo progressa v promyshlennosti" [Cost-Accounting Factors in Speeding Up Technical Progress in Industry], Kiev, 1973, p 207; S. M. Yampol'skiy and S. G. Galuza, "Ekonomicheskiye problemy upravleniya nauchno-tekhnicheskim progressom" [The Economic Problems of Managing Scientific-Technical Progress], Kiev, 1976, p 307; etc.

3. L. M. Gatovskiy, "Nauchno-tekhnicheskiy progress i ekonomika razvitogo sotsializma. Ocherki politicheskoy ekonomii" [Scientific-Technical Progress and the Economics of Advanced Socialism. Essays in Political Economy], Moscow, 1974, pp 272-273.

4. "Guidelines on Procedure for Establishing Incentive Supplements to Wholesale Prices of Highly Effective New Products for Production and Technical Purposes and Deductions From Wholesale Prices on Products in the Second-Quality Category and Also on Products Not Certified Within the Prescribed Period," in the book "Sovershenstvovaniye khozyaystvennogo mekhanizma.

Sb. dokumentov" [Improvement of the Economic Mechanism. Collection of Documents], Moscow, 1980, p 177.

5. "Metodika opredeleniya optovykh tsen na novuyu produktsiyu proizvodstvenno-tekhnicheskogo naznacheniya" [Method of Setting Wholesale Prices of New Products for Production and Technical Purposes], Moscow, 1974.

6. "Metodika opredeleniya optovykh tsen na novuyu produktsiyu proizvodstvenno-tekhnicheskogo naznacheniya," Moscow, 1969, p 13.

7. Yu. V. Borozdin, "Tsenoobrazovaniye i potrebitel'naya stoimost' produktsii" [Pricing and the Use Value of the Product], Moscow, 1975, p 113.

8. K. Marx and F. Engels, "Soch." [Works], Vol 20, p 321.

9. For example, this problem has been thoroughly investigated in the book of L. M. Gatovskiy, "Voprosy razvitiya politicheskoy ekonomii sotsializma" [Problems in Development of the Political Economy of Socialism], Moscow, 1979, pp 339-359.

10. Yu. V. Borozdin, "Tsenoobrazovaniye i potrebitel'naya stoimost' produktsii," Moscow, 1975, pp 39-40.

11. Ibid., p 113.

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STANDARDIZED PROFIT DISTRIBUTION DISCUSSED

Prospects, Problems

Moscow EKONOMICHESKAYA GAZETA in Russian No 9, Feb 83 p 10

[Article by Doctor of Economic Sciences Professor G. Bazarova, deputy director of the Scientific Research Institute of Finance: "The Standardized Distribution of the Profit"]

[Text] The increase of the role of financial and credit levers in the intensification of production, the strengthening of cost accounting and the tightening up of the policy of economy are one of the main directions of the improvement of the economic mechanism.

A new financial lever--the standardized method of distributing the profit--is called upon to play an important role in the accomplishment of these tasks. The standards increase the responsibility of enterprises, associations and ministries for the results of their financial and economic activity and heighten their interest in the most efficient use of material, manpower and financial resources. The results of the work of a number of ministries, first of all the Ministry of Instrument Making, Automation Equipment and Control Systems, confirm this.

The changeover to the new method of distributing the profit is beginning "from above"--from the ministry--and is being carried out gradually. As the necessary conditions are created and experience is gained, standards of the deductions from the profit should be established for all production associations and enterprises.

The portion of the profit, which is specified in accordance with the standards, is intended for the financing of capital investments, the repayment of bank credits and the payment of interest for them, the assurance of the increase of working capital, the formation of the unified fund for the development of science and technology and economic stimulation funds, as well as for other planned expenditures on the development of the sector. In conformity with these standards the absolute amount of the deductions from the profit for the state budget, which is paid in the full amount regardless of the fulfillment of the plan on the profit, is approved in the plans.

Distribution in 1981 of the Profit of the Industrial Ministries Which Have Been Changed Over to the Standardized Method
(percent)

Ministries	Deductions for state budget	Left at the disposal of sectors
Ministry of Heavy and Transport Machine Building.	24.0	76.0
Ministry of Power Machine Building.	19.3	80.7
Ministry of the Electrical Equipment Industry	23.4	76.6
Ministry of Instrument Making, Automation Equipment and Control Systems	51.4	48.6
Ministry of Tractor and Agricultural Machine Building.	31.1	68.9

Problems of Introduction

In spite of the obvious effectiveness, the introduction of the standardized method is taking place slowly and is faced with certain difficulties. At the beginning of 1983 it was being used in only eight machine building ministries and, moreover, in the ministries of the meat and dairy industry and the food industry of individual republics, in three republic construction ministries (the Belorussian SSR Ministry of Industrial Construction and Ministry of Installation and Special Construction Work, the Ukrainian SSR Ministry of Construction of Heavy Industry Enterprises), the Main Administration of Motor Transport of the Moscow City Soviet Executive Committee, as well as in the State Committee for Publishing Houses, Printing Plants and the Book Trade. For the present there is not one ministry of the extractive industry among those which have been changed over. The union ministries of light industry and the food industry are in no hurry to change over to the new method.

So far the changeover of all the machine building ministries to the standardized method of distributing the profit has not been completed. The standards for the present are finding poor application in the basic unit of management--at production associations and enterprises.

The standardized method is more rigid as compared with the method previously used, and in this lies one of the reasons that ministries are postponing the dates of the changeover to it. Thus, the payments for above-standard stocks of physical assets, for which credit has not been extended by the bank, and uninstalled equipment and the interest on credit take place at the expense of the profit which is left in the management in accordance with the standard. As a result, in the case of the changeover to the new method the enterprises lose a portion of the monetary assets which in the case of the old procedure would have been left at their disposal.

The ratio of the distribution of the above-plan profit between the management and the budget, which formed over many years, on the average came to 60 : 40. Now this ratio is 50 : 50. In the case of the old procedure only the net surplus of the above-plan profit after the reimbursement by means of it of the additional expenditures of enterprises was channeled into the state budget. The entire profit obtained in excess of the plan could also remain at individual enterprises. Under the conditions of the standardized method all the enterprises, which exceed the plan of the profit, regardless of the need for assets should pay half of these assets to the budget.

In the case of the exceeding of the plan of the profit by more than 3 percent the deductions for the budget from the amount of the excess increase to 75 percent. By means of their own share of the above-plan profit the enterprises pay for the excess as against the plan of the fee for capital and the interest on credit. As the studies conducted in 1981 showed, at many enterprises, which received an above-plan profit, there was not enough of it for the financing of expenses, first of all for the additional deductions for the economic stimulation funds.

Thus, the Mogilev Strommashina Plant with the exceeding of the fund-forming indicators was not able to make additional deductions for the economic stimulation funds due to the lack of the necessary amount of the above-plan profit: it was allocated for meeting the above-plan fee for capital. For the same reason the Severodonets Impul's Scientific Production Association did not have additional deductions.

Of course, the main means of overcoming these difficulties is the elimination of the shortcomings in financial and economic activity and the elimination of the above-standard reserves of commodity stocks and uninstalled equipment.

At the same time it is expedient also to make some refinements in the procedure of distributing the above-plan profit with respect to the enterprises which make settlements with the budget in a decentralized manner. Thus, between the enterprises and the state budget it would be possible to distribute in accordance with the standard only that portion of the above-plan profit, which is left over after the repayment of the above-plan "debts" on the fee for capital and the interest on credit and the additional deductions for the economic stimulation funds. However, a drawback of such an approach consists in the actual decrease (and in many cases a considerable decrease) of the share of the budget in the profit being distributed. Another means, which is more acceptable, is to increase the assistance in the formation of economic stimulation funds to some enterprises at the expense of other enterprises of the same system, which have sufficient amounts of the net above-plan profit. This is possible by the centralization with the consent of the enterprises of a portion of such a profit by superior organizations, which is envisaged by the prevailing statute. Finally, it would be possible to raise somewhat the "barrier," from which a lower norm of the deductions for enterprises in the case of the exceeding of the plan comes into effect--from 3 to 5 percent.

On the Procedure of Settlements

The organization of the settlements on payments, which should induce enterprises to the timely and complete meeting of the obligations to the budget and ensure the monitoring by financial organs of the results of their activity, is of considerable importance. The envisaged decentralized procedure of settlements, when not the ministries, but associations and enterprises make the payments to the budget, conforms to a greater extent to these requirements.

Centralized recalculations can be made upon the applications of the ministries. Of the eight machine building ministries, which have been changed over to the standardized method, they are being used in seven, while the decentralized procedure of settlements is being used only in the Ministry of Machine Building for Animal Husbandry and Fodder Production. With respect to the fee for capital all the enterprises have been making settlements in a decentralized manner since 1981.

In our opinion, it is possible to regard the decentralized procedure of settlements with the budget as a transitional form, which promotes adaptation to the new procedure of distributing the profit.

It is necessary to display a special approach when changing over ministries to the standardized method of distributing the profit with respect to a portion of the enterprises of the extractive, as well as light and the food industries, the results of the production activity of which are susceptible to the influence of the natural factor.

It would be advisable to grant such enterprises the right to make settlements with the budget on the basis of the established standard in accordance with the actually obtained profit.

In the food and light industries it would be possible to combine the deductions from the actually obtained profit with the reimbursement by the enterprises of the unmade payments during the years of the five-year plan, which are more favorable from the point of view of deliveries of agricultural raw materials. Here the approval of economically sound standards of working capital is acquiring particular importance. For the present such work has been performed only in machine building and the extractive industry, which promoted the strengthening of the financial status of the enterprises.

Financial Reserves

With the changeover of ministries, associations and enterprises to the standardized method of distributing the profit the demands on the level of the material and financial reserves as one of the conditions of the assurance of the stability and balance of the plans increase.

The ministries have been granted quite extensive rights in the formation and use of financial reserves. Along with the reserve funds--the reserve of financial aid, the reserve of amortization deductions for capital repair--they can leave at their own disposal the so-called reserves in the plan (on the profit, the sales volume, the wage fund, the amount of capital investments), as well as envisage a reserve portion in the unified fund for the development of science and technology and the economic stimulation funds.

The norms of the deductions for the reserve of amortization deductions for capital repair, as well as for the centralized funds of all-union industrial associations and the reserves of ministries for economic stimulation funds have been increased from 10 to 15 percent. The maximum norms of the deductions for the reserve of financial aid have been specified in the amount of up to 4 percent of the profit of enterprises instead of the previous 1-3 percent.

However, the actual amounts of the financial reserves are considerably less than the established norms. In a number of ministries (the Ministry of Heavy and Transport Machine Building, the Ministry of Power Machine Building) the shortage of internal working capital exceeds by 10- to 15-fold the amounts of the reserve of financial aid. The reserves in the plan are also negligible in their amounts, which decreases the possibilities of economic maneuvering.

The inadequacy of the financial reserves is making urgent the question of finding possibilities of their increase as the revenues and profitability of production increase. It seems expedient to increase the importance first of all of the reserve of financial aid as the central unit in the system of sectorial financial reserve assets. More extensive functions should be attached to it, by reimbursing by means of it in case of need a portion of the planned expenditures of enterprises in case of a shortage of internal sources and the payment to the budget of the entire planned amount of payments from the profit. These presumes the corresponding increase of its amounts.

On Adjustments

The gained experience of using the standardized method of distributing the profit has revealed already at this stage several problems which inevitably will require their solution in the immediate future.

The independent nature of the standards of the deductions from the planned profit and their strong "attachment" to the assignments of the annual plan lead in the case of any change of the indicators to the corresponding adjustment of the standards. This weakens the confidence in the standards and reduces their stimulating role. The stability of the standards under these conditions is a goal which is hard to achieve. In the process of fulfilling the plan the revision of the amount of the profit, which is left at the disposal of the economic unit in conformity with the changing conditions of production, is made periodically. The standard as if "is made to fit" the required amount. The amount of the payments to the budget is also revised accordingly.

Due to the imbalance of the plan and shortcomings in financial and economic activity the principle of guaranteed payments turned out to be hard to implement for individual enterprises and even sectors. This principle, although placing the state budget under especially favorable conditions, at the same time as if estranges it from the real state of affairs in the economy.

Experience attests that the replacement of one procedure of distributing the profit with another takes a quite long period of time and requires a thorough experimental check. In our opinion, while continuing to use and improve the standardized method of distributing the profit, the experimental check of the new mechanism of distributing the profit should be readied and carried out.

What is meant are the use of a graduated profit tax, the introduction of deductions for local budgets and the transfer to the disposal of associations and enterprises of the surplus of the profit for the financing of planned expenditures and the material stimulation of collectives, which creates stronger stimuli for efficient management. The profit tax could be organized on the basis of a scale of differentiated rates, which increase subject to the level of profitability. Such a scale would be stable and uniform for the enterprises of all sectors of industry.

Roundtable Discussion

Moscow FINANSY SSSR in Russian No 10, Oct 82 pp 23-36

[Article: "Problems of the Introduction of the Standardized Method of Distributing the Profit (A Roundtable Meeting)"]

[Text] In the set of measures on improving planning and strengthening the influence of the economic mechanism on increasing production efficiency and work quality, which are envisaged by the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, great importance is attached to the standardized method of distributing the profit.

The editorial board of the journal held a roundtable meeting, which was devoted to the introduction of the standardized method of distributing the profit. Workers of the USSR Ministry of Finance, USSR Gosplan and a number of industrial ministries and scholars were invited to it.

Doctor of Economic Sciences Professor Yu. M. Artemov, editor in chief of the journal FINANSY SSSR, delivered the opening address to those who had gathered. He stressed that the improvement of the economic mechanism is the practical implementation of the scientifically sound economic policy of the party, the decisions of the 26th CPSU Congress and the theses advanced in the statements of L. I. Brezhnev on the key questions of the development of the economy. The implementation of the measures outlined by the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 should be regarded as a major economic and political task, the accomplishment of which will contribute to the further increase of the efficiency of social production and work quality.

A number of all-union and republic ministries have already changed over to the standardized method. Some experience of its use, which it is necessary to analyze and utilize, has been gained. The ministries, associations and enterprises are faced with the task of the further transition to this method, for the accomplishment of which the necessary prerequisites are being created--new wholesale prices and rates have been introduced, the formulation of economically sound standards of working capital for industrial ministries has been completed.

Then there was a discussion of the problems connected with the introduction of the standardized method.

Doctor of Economic Sciences Professor G. V. Bazarova, deputy director of the Scientific Research Institute of Finance. The changeover of industrial ministries, associations and enterprises to the standardized method of distributing the profit holds a prominent place in the set of measures on the improvement of planning, the development of cost accounting and the increase of the role of economic levers and stimuli. The introduction in the method of distributing the profit of economic standards, which are determined on the basis of the assignments of the five-year plan and envisage an increase of the resources being left at the disposal of ministries, associations and enterprises subject to the improvement of the end results of economic activity with the simultaneous increase of the deductions for the state budget, is regarded as a necessary means of the further development of cost accounting.

The changeover should be made gradually, subject to the readiness of the ministries, starting with the 11th Five-Year Plan. As the necessary conditions are created and experience is gained, standards of the deductions from the profit should be established for production associations and enterprises.

The use of the standardized method in a number of sectors, in spite of certain difficulties, yielded as a whole positive results.[1] However, its introduction is still taking place slowly. At present it is being used in seven machine building ministries, three republic construction ministries (the Belorussian SSR Ministry of Industrial Construction and Ministry of Installation and Special Construction Work, the Ukrainian SSR Ministry of Construction of Heavy Industry Enterprises), the ministries of the meat and dairy industry and the food industry of individual union republics, the Main Administration of Motor Transport of the Moscow City Soviet Executive Committee and the motor transport managements of a number of republics, as well as in the State Committee for Publishing Houses, Printing Plants and the Book Trade. A predominant portion of these ministries, departments and organizations had already been changed over prior to the prmulgation of the decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of the economic mechanism. Among those which have been changed over so far there is not a single ministry of the extractive industry.

What are the reasons for the slow accomplishment of the posed task and how is it to be expedited?

Many ministries explained the delay in the changeover to the standardized method by the expectation of new wholesale prices and rates. Now new wholesale prices have been introduced. They reflect more completely the socially necessary expenditures of labor and as a whole created the conditions for the broadening of the range of effect of the standardized method, although, unfortunately, not in all sectors. However, the reasons for the slow introduction of the new method are connected not only with prices. To a considerable extent they are dictated by the difficulties of realizing the advantages of the new mechanism of distributing the profit under the formed specific economic conditions of managements, as well as by the predominance of its rigid aspect--the greater responsibility for the results of the activity.

The lack of stable plans, the inadequate stability of economic ties and the difficulties of material and technical supply limit the possibilities of enterprises and associations in the elaboration of additional obligations on the profit, the fulfillment of which would enable them to obtain additional assets on the basis of the standard. Under these conditions the assurance of guaranteed payments, that is, the payment to the budget of the total planned amount of payments regardless of the fulfillment of the plan of the profit, for many enterprises is quite difficult. Therefore, the comprehensive implementation in all sectors of industry and in construction of the entire set of measures on the improvement of the economic mechanism, which are envisaged by the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, the stabilization of economic ties, the timely approval of the plan assignments and the conclusion of long-term economic

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1. For more detail on this question see G. V. Bazarova and O. V. Repina, "The Standardized Method of Distributing the Profit," FINANSY SSSR, No 8, 1982 (editor's note).

contracts are one of the decisive conditions of the effective use of the standardized method of distributing the profit.

The delay in the introduction of the new method is also due to shortcomings in the activity of the ministries themselves and to the slow reorganization of the style and methods of management in conformity with the new requirements, which presume the considerable increase of the level of economic work in the sector and in all its economic units. This factor also appears in the work of those ministries which have already been changed over to the standardized method of distributing the profit. It is a question of the slow extension of the standards to subordinate associations and enterprises and, in a number of instances, of their formal establishment and the aspiration to retain the centralized procedure of settlements with the budget on payments from the profit (in accordance with the consolidated balances and reports), which makes it possible to cover the shortcomings in the work of some enterprises as the expense of the profit of others which operate well.

Meanwhile the experience of the operation of the enterprises, which have been changed over to the standardized method, attests to higher results, which in this case are being achieved with respect to the profit, labor productivity, the decrease of the product cost, the output-capital ratio and the placement of production capacities into operation. Therefore, it is important to broaden considerably the sphere of use of the standardized method of distributing the profit in the main cost accounting unit.

For the purposes of creating more favorable prerequisites for the use of the new method it seems advisable to implement measures, which are aimed at some "relief" of the above-plan profit as the source of the reimbursement of a number of expenses, and to lend a more purposeful nature to the use of the saving on the fee for capital, having linked it with the material incentive fund.

Candidate of Economic Sciences V. M. Protsenko, chief of the Finance Administration of the USSR Ministry of the Meat and Dairy Industry. We have about 4,000 enterprises on an independent balance sheet. In conformity with the approved plan of measures eight enterprises and associations were changed over to the standardized method of distributing the profit on 1 January 1980, while the ministries of the meat and dairy industry of the Azerbaijan, Uzbek and Estonian SSR's were changed over on 1 January 1981. The further dissemination of the new method of distributing the profit was slowed down, while the Chernovitsy Association of the Milk Industry (the Ukrainian SSR) and the Goris Cheese Plant (the Armenian SSR) returned to the old method.

In the meat and dairy industry the expansion of the use of the new method of distributing the profit is becoming complicated due to difficulties in the development of the raw material base and the nonfulfillment of the plan of the production and sale of products by a number of enterprises for reasons which do not depend on them, which is leading to the nonfulfillment of the plan of the profit and a shortage of internal working capital.

It should be noted that the ministries of the meat and dairy industry of the Azerbaijan and Uzbek SSR's in 1981 exceeded the plan of the profit by 6 million rubles and left at their disposal 3.2 million rubles, which they allocated for the development of production, the covering of the expenditures on capital repair, the formation of additional incentive funds, the payment of bonuses in accordance with the socialist competition, the repayment of the above-plan interest on credit and other needs.

In the case of the exceeding of the plan of the profit its above-plan portion is divided between the budget and the enterprise, while in the case of nonfulfillment the wanting amount is exacted only from the enterprise. Here it must be taken into account that the enterprises of the sector pay into the budget more than 70 percent of the total profit. Perhaps it would be worthwhile to think about not making the enterprises totally responsible in the case of the nonfulfillment of the plan of the profit for reasons which do not depend on the collective.

As for the question of the centralization or decentralization of the settlements with the budget, I believe that it is necessary to refer it to the union republics.

Doctor of Economic Sciences Professor D. S. Molyakov, head of the Chair of Finance of the Sectors of the National Economy of the Moscow Institute of Finance. When examining the questions of expediting the changeover of industrial ministries, associations and enterprises to the standardized system of distributing the profit it must be borne in mind that it is closely connected with the strengthening of cost accounting. With the development of cost accounting the system of distributing the profit also improved. The experiment of changing over the Ministry of Instrument Making, Automation Equipment and Control Systems to the standardized method of distributing the profit emerged owing to the need to change over ministries to a cost accounting basis.

The Ministry of Instrument Making, Automation Equipment and Control Systems as a whole is a highly profitable ministry with a relatively small number of highly profitable enterprises. It has not had in any year enterprises which did not fulfill the plan on the profit. In spite of these advantages of the Ministry of Instrument Making, Automation Equipment and Control Systems as compared with other industrial ministries here it has not been completely possible to implement two basic principles of the new system of distributing the profit--the stability of the standards of the profit, which is left at the disposal of industry, and the changeover to the new method of subordinate associations and enterprises. What is the reason? In our opinion, the method of the standardized distribution of the profit, which is being used, does not always take into account the specific conditions of the work of the ministries, industrial associations, production associations and enterprises, which has a great influence on the uniformity of the fulfillment of the plans with respect to individual associations and enterprises. The principle of using stable standards of the distribution of the profit by years of the five-year plan is not feasible in all instances, since financial relations are very complex by their nature and are mobile, it is impossible to incorporate them in the previously established norms, especially for a long period. If this were possible, there would be no problem of drawing up the state budget for the five-year plan.

The implementation of the principle of a guaranteed absolute amount of payments to the budget for a ministry as a whole regardless of the degree of fulfillment by it and every association and enterprise of the plan of the profit can adversely affect the cost accounting interests of production associations and enterprises and their working capital.

Candidate of Economic Sciences A. G. Igudin, deputy director of the Central Scientific Research Institute of Information and Technical and Economic Studies of the USSR Ministry of Tractor and Agricultural Machine Building. The problem of the standardized distribution of the profit is one of the central problems of the improvement of the financial and credit mechanism. The new method of distributing the profit is called upon to ensure the strengthening of the cost accounting of enterprises (associations) in close interconnection with the observance of statewide interests, including the interests of the budget. It is another matter that at present it is necessary to improve this method.

The standardized method provides an advantage only in the case of the exceeding of the plan of the profit and if a great exceeding of the expenses, which are met at the expense of the above-plan profit, is not permitted. Well-operating enterprises leave at their own disposal an additional portion of the above-plan profit. When the plan on the profit is not fulfilled by an enterprise, it does not have the advantages which the standardized method can provide. At the same time a more rigid procedure of financing planned measures, which is also supplemented by the fact that the planned payments to the budget are guaranteed in full, regardless of the fulfillment of the plan of the profit, is in effect.

Practical experience has shown that the standard of the distribution of the planned profit, which determines the portion of it which is left in the economy, does not work, it has disappeared from the prevailing mechanism. In the case of the nonfulfillment of the plan of the profit the settlements are made not according to the standard, the entire amount of the planned payments is paid to the budget. Such a guarantee of payments is ensured by every enterprise (association). At the same time the successful operation of enterprises (associations), their obtaining of the necessary end financial results, as well as the real responsibility for the planned payments of not only the payers, but also their superior organizations should be at the basis of the guarantee of the payments to the budget. On the other hand, it is hardly proper that local financial organs have been placed under conditions, which do not create a particular interest in influencing the lagging enterprises, since in the case of any results of the activity of these enterprises the planned payments to the budget are made in full, although at the cost of the withdrawal from them of internal working capital. Only such a procedure of settlements with the budget, which interests not only the collectives of enterprises, but also the organs, which directly represent the interests of the budget, in the unconditional fulfillment of the plan of the profit, can actually meet the demands being made on it.

As to the interrelationship of the standardized method of distributing the profit with financial planning, it is necessary to say the following. The financial plan at all levels of management of a sector has now begun to be drafted for the five-year plan, but 5-year financial plans for the present are of no practical importance. Even within a year numerous changes of the financial plan are permitted.

In the Ministry of Tractor and Agricultural Machine Building proposals on the improvement of the procedure of settlements with the budget on the basis of the standardized method of distributing the profit have been elaborated. Their essence consists in combining the methods of settlement: the decentralized method (during the year the recalculations on the actual profit should be made with the local financial organs for the increase--according to the standard 50 percent--or the decrease--according to the standard of the distribution of the planned profit between enterprises and the budget) and the centralized method (the final recalculation in accordance with the results of the year according to the report of the ministry with the guarantee of the planned payments for the sector as a whole). In this case the standard of the distribution of the planned profit will also work.

It also seems that the application of the standard not to the total amount of the above-plan profit, but to its net surplus would conform to a greater extent to the new method of distributing the profit. In the case of such a procedure this method will meet more completely the cost accounting interests of enterprises and the sector.

When using the standardized method it is necessary to plan more soundly the expenses, the exceeding of which should be covered by means of the above-plan profit. This pertains first of all to the payment of interest for credit and to the losses of housing and municipal services, with which in many cases great above-plan expenditures are connected.

A few words about the role of the fee for capital under the new conditions. The standardized method is linked with the guarantee of planned payments to the budget. As to the sector of tractor and agricultural machine building, here their relative guarantee is already being ensured by the fact that nearly 80 percent of all the payments from the profit are received in the form of the fee for productive capital, which does not depend on the change of the actual profit.

With allowance made for the nature of the payments from the profit and the functions characteristic of them it seems that their structure should include without fail two types of payments: one is a relatively stable one, the amount of which is determined with allowance made for the resources allocated to the management and which does not depend on the change of the actual profit; the other is a dynamic one, the amount of which is closely connected with the change (increase or decrease) of the actual amounts of the profit.

In the Ministry of Tractor and Agricultural Machine Building during the experiment a differentiation of the norm of the fee for capital in terms of the additional fee for above-plan productive capital, which was made available to the ministry, was made. The norm of this fee was established at 1 to 3 percent subject to the annual (standard) profitability of the enterprise. Thus, the combination of the uniform national economic standard (6 percent) with the differentiated approach to enterprises was ensured. This made it possible to extend the effect of the indicated financial lever to all enterprises which are planned to operate with a profit, including those with a low profitability, which is especially important.

For the first time among the sectors of industry in the Ministry of Tractor and Agricultural Machine Building the standardized method of distributing the profit was applied not only to all-union industrial associations, but also to all enterprises. However, during the experiment (prior to 1981) it was used within the sector in the distribution of the above-plan profit of enterprises only when they had a surplus portion of it, which prior to the changeover to the new conditions of management was transferred entirely to the budget. Under the new conditions it was divided according to the standard so that a portion of it was additionally left to the enterprises.

Here it was noted that the main issue consists not in the methodology, but in the comprehensive introduction of the new conditions of management. The comprehensive approach, to be sure, is important, but the solution of a number of methodological problems is urgent. The methodology of settlements must be improved. It is necessary to draw the proper conclusions from the experience of the sectors, which were the first to change over to the new conditions of management, and to eliminate the drawbacks of individual elements of the new economic mechanism before extending it to all sectors.

N. F. Malakhov, chief of the Finance Administration of the USSR Ministry of Nonferrous Metallurgy. The standardized method of distributing the profit is, to be sure, a progressive and, therefore, useful matter. However, it can provide an real impact only in conjunction with the solution of the other problems which are stipulated by Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers. The tendency to view the standardized method in separation from other questions and as a panacea for all shortcomings is incorrect.

Our acquaintance with the work of a number of machine building ministries under the new conditions showed that the same shortcomings, which exist in the sectors which have not been changed over to cost accounting, are characteristic of the enterprises subordinate to them, as well as the staff of the ministries. The enterprises of the machine building ministries, as in the past, have large losses of metal, including nonferrous and rare metals. They are permitting large unproductive expenditures and losses. At the same time the report that the shortage of working capital is being made up from the budget for a number of the indicated ministries and allocations for the financing of other expenditures are being earmarked for them, was a surprise to me. Where, then, is cost accounting? The main drawback is the lack of stable standards, and here scientists and experienced workers must do a great deal of work, first of all on finding the material and financial resources for the assurance of the balance of the plans.

But now allow me to express my opinion on the possibility of using the standardized method of distributing the profit in the extractive, raw material sectors of industry and on the question of the fee for capital.

The constant commitment to the economic turnover of deposits with a lower content of useful components and a complex mineralogical composition, which require the introduction of new, more perfect methods of extraction, concentration and metallurgy, is one of the objective laws of the development of the sectors of industry, which are based on the processing of mineral raw materials. Moreover, the deposits, especially of nonferrous metals, are located in remote, hard to reach regions. Indeed, more productive equipment, efficient technological processes and means of communication have appeared, but they do not offset the losses which we have, since the depletion of the raw material base inevitably and sharply increases the specific capital investments in the maintenance of capacities and their increase and causes a considerable increase of the expenditures on the production of output. It is not always possible to take the influence of these factors on the decrease of the amount of the profit and the profitability into account with the proper accuracy even in the annual plans.

The content in ores of the majority of types of nonferrous and rare metals in the past 20-25 years has decreased considerably. Many rare and noble metals have to be extracted almost according to the saying "to look for a needle in a haystack." Today at some of our associations the growth rate of the amounts of work being performed on the extraction of the body of rock exceeds by a great deal the rate of increase of the production of output. Moreover, the enterprises are forced to work under the ground at great depths, while it is necessary to transport people, materials and complicated equipment there. Hence the annual decrease of the profit, the profitability and the output-capital ratio and the worsening of other technical, economic and financial indicators.

During the 9th Five-Year Plan and the first years of the 10th Five-Year Plan our sector met all its expenses, including the expenditures on new construction, by means of the intrasectorial revenues and still paid annually to the budget large amounts for statewide purposes. This was the best example of self-financing. Unfortunately, in 1981 the ministry already received from the budget considerable financial resources, and this was in the absence of an increase of capital investments.

The introduction in 1982 of new wholesale prices sharply increased the profit, but this increase will not be enough for a long time. Even under these conditions we have enterprises, 15 percent of which are planned to operate at a loss. In this connection the following question merits the attention of economists. Previously, when a state subsidy was granted for meeting the planned losses, in accordance with the instructions of the USSR Ministry of Finance enterprises also received it for the exceeding of the plan of the production of unprofitable output in accordance with the planning norm. Now, when the planned losses are covered by means of the profit of other enterprises, such possibilities do not exist, since the entire above-plan profit is withdrawn for the budget. This does harm. Often the director of one enterprise or another says to us: "But why would I provide output in excess of the plan? In order to obtain above-plan losses and to lose working capital? For then you would make the suggestion to punish me and deprive me of bonuses." This is one of the questions which must be settled.

The raw material sectors, more than others, not counting light and the food industries, are susceptible to the influence of factors which do not depend on them, and frequently the plan is changed downward for them for objective reasons.

Those are the problems which, in my opinion, must be taken into account when settling the question of the changeover of the ministries of the raw material sectors to the standardized method of distributing the profit. At the same time what has been said does not at all mean that this question should not be settled. On the contrary, the study of everything positive, which is being achieved in the extractive sectors, must continue to be carried out, and the balance of the production and financial plans must be achieved. It is also necessary here, apparently, to seek ways of creating a special financial reserve for the unaccounted for decrease of the content of metals in the basic raw materials.

Now concerning the fee for productive capital. It is my conviction, which is based on the study of the effect of this indicator at practically all the enterprises of nonferrous metallurgy, that it has not justified its main purpose. This fee does not have an influence on the increase of the efficiency of the use of productive capital. What has been said can be confirmed by the following data. From 1969 to 1982 our enterprises paid to the budget in the form of the fee for the indicated capital more than 7 billion rubles and during this time the output-capital ratio and the profitability decreased considerably and the surpluses of uninstalled equipment increased. The positive and negative effect of many factors showed here. At the same time the positive influence of the fee for capital is not traced. The managers of enterprises and the chiefs of shops know about this fee only from a review in classes on concrete economics and do not sense its effect in practical work. Such is the fate of the development fund, which has turned into a conventional source of the financing of capital investments.

I would like to point out the usefulness of today's meeting and to express the wish that in the future individual managers and chiefs of the finance departments of enterprises would be invited to such meetings. These are experienced workers and they can suggest many things.

And there is another thing. While contributing for many years to the journal, I have noticed the desire of a number of authors to indicate mainly the positive aspects of the practical settlement of one question or another of economic reform, without revealing the bad sides or by doing this very leniently. In my opinion, one should not act this way, this will do nothing but harm. If it is shown that some element of the reform is not working, it must be rejected, while everything that has shown itself favorably must be introduced more boldly.

Doctor of Economic Sciences G. S. Mergelov, chief of the Finance Administration of the Ministry of Instrument Making, Automation Equipment and Control Systems. As is known, the Ministry of Instrument Making, Automation Equipment and Control Systems was the first to change over to the system of sectorial cost accounting. It envisaged the enhancement of the role of the five-year plan, self-sufficiency in financial resources (planned self-financing), guarantees of planned payments to the budget and the use of long-term standards of the distribution of the profit and the planning of the wage fund.

The standardized method of distributing the profit between the sector and the budget is one of the main distinctive features of the system of economic relations which are forming in connection with the changeover of the industrial complex of the ministry to cost accounting. What is its essence? First of all there is the strengthening of the cost accounting principles in the activity of the sector or another production unit which is being changed over. Indeed, the standardized method creates the economic prerequisites for the increase of economic operational independence and the changeover to self-financing on the basis of complete self-sufficiency, the increase of economic liability, material interest and control by the ruble. It can be said that the entire set of cost accounting elements is represented here. At the same time the guarantees that the economic impact obtained by the cost accounting unit in the form of an additional profit will be used in a specific proportion in its interests and will not entail changes of the plan assignments subject to the achieved level, should be ensured by means of the standard of deductions from the profit.

When readying the experiment we regarded the standardized method of distributing the profit as a tool of the improvement of the economic mechanism, by means of which, on the one hand, an interest of the ministry, associations and enterprises in the most efficient management of the economy and the economical use of material and financial resources is created and, on the other, the unconditional meeting of the financial obligations to the state is ensured.

deviations with respect to the most important directions of its activity. Special control should be established over the fulfillment of the plan of the profit, the payments to the budget, the timeliness of the settlements for products and the financial situation of associations and enterprises. Finally, sectorial cost accounting requires the great vocational training of economic personnel, especially financial workers.

For the extension of the practice of using the standardized method it is necessary to solve a number of problems of a methodological nature, having eliminated the existing shortcomings. The main one consists in the fact that with the sharply increased economic liability the economic prerequisites have not been created for the increase of the interest of cost accounting units--sectors, all-union industrial associations, production associations and enterprises--although the strengthening of the stimuli was called for by the decree of the CPSU Central Committee and the USSR Council of Ministers. Moreover (and here we find the answer to the question, why did the Ministry of Instrument Making, Automation Equipment and Control Systems not extend the standardized method to all the enterprises of the main link), the possibilities of the material stimulation of production collectives even decreased. Why did this happen? Without touching upon all the reasons, I will speak about the main one. In the case of the ordinary procedure of distributing the profit as a whole about 60 percent of the above-plan profit was left at the disposal of industry, while individual enterprises under certain conditions could use up to 100 percent. According to the new statute only 50 percent is being left at the disposal of ministries, associations and enterprises.

In 1980 in the Ministry of Instrument Making, Automation Equipment and Control Systems they changed over as an experiment to the standardized distribution of the profit the first group of enterprises and associations of the main link. Practical experience showed that the material stimuli, especially at the leading plants, had decreased owing to the fact that the incentive funds for exceeding the plan had begun to be credited in smaller amounts (within the limits of the standardized deductions of the above-plan profit).

The problem of changing the sectors of industry over to cost accounting and, in particular, to the standardized method of distributing the profit with its extension to the main link can be solved only in combination with the implementation of other measures on the improvement of planning and the perfection of the economic mechanism. First of all there are the transformation in reality of the five-year plan into the basic form of planning and economic activity, the assurance of its balance and stability; the radical improvement of affairs in the sphere of material and technical supply and construction; the creation of emergency, material and financial reserves.

It is also necessary to strengthen the stimulating function of the additional profit. For this the amounts, which are to be deducted for the incentive funds for the exceeding of the plan on the fund-forming indicators, should be excluded from the total amount of the actual profit prior to the distribution of the above-plan profit between the economic units and the budget. As an additional stimulus it is also expedient to grant cost accounting units the right to acquire equipment by means of the above-plan profit in excess of the limits of capital investments.

The question of the form of settlements with the budget continues to be debatable. If we approach it from the standpoint of strengthening the cost accounting of the main link, it is possible to regard the decentralized form of settlements as justified. However, in this case, in our opinion, the ministries will not be able to act as guarantors of the completeness of the payments to the budget. Moreover, it is impossible not to consider that the decentralized procedure of settlements will lead, if the state of affairs with the fulfillment of the plan of the profit does not improve, to an increase of the shortage of internal working capital. In the case of decentralized settlements a difficult methodological question also arises: How does one combine in practice the use of standards of the deductions from the profit at the level of the ministry, the all-union industrial association and the enterprise? For the present there is no answer to it. On this basis the centralized form of settlements with the budget seems preferable to us.

Doctor of Economic Sciences V. S. Pavlov, chief of the Department of Finance, the Production Cost and Prices of USSR Gosplan. When we speak about the standardized distribution of the profit, it seems to me, the main thing consists in the fact that one must not regard it in isolation from the general situation in national economic planning as the main form of management. Financial planning is an integral component of national economic planning, while the standardized system of distributing the profit all the more so is only one of the elements of financial planning. At the same time in the press and in the statements of some economists there is often observed, unfortunately, the tendency to regard the individual elements of financial planning--the fee for capital, fixed payments, the interest on credit, the net surplus of the profit, the standardized distribution of the profit and so on--as a self-sufficient mechanism which operates in isolation. Hence, too, the hypertrophied notions about the potentials and effectiveness of one element or another, which have not been confirmed by practical experience.

Owing to this, before examining one cause or another of the slow introduction of the standardized system of distributing the profit, it would not hurt to recall as a general prerequisite that finance and credit and, consequently, the entire financial and credit mechanism, being categories of commodity production, do not determine the basic economic relations under the conditions of the public ownership of the means of production. They only have a certain influence on them. In other words, the financial and credit mechanism can either promote and expedite or slow the achievement of the goals and the accomplishment of the tasks under the conditions of the direct planned management of the economy. Precisely for this reason the first task, which is accomplished during financial planning, is to ensure the creation of the necessary sources of financial resources and their distribution in conformity with the purposes and needs, which are specified by and ensue from the assignments of the plan of economic and social development according to addresses and territories. One of the basic advantages of the planned system of the management of the national economy--the possibility of concentrating manpower, material and financial resources on the key tasks and projects, which are decisive for the entire country--is realized in the process of this activity. Hence ensues the most important thesis that financial resources in socialist society are channeled to wherever material and manpower resources have already been channeled. In socialist society there is no and can be no free mobility of capital and manpower, but the planned distribution of material resources and labor and the control of the movement of monetary assets, which is coordinated with it, do exist. The efficiency and effectiveness of the financial and credit mechanism under these conditions are determined by that amount of material resources, including for personal consumption, which can change the direction of their own movement and be channeled to wherever financial resources are available, or these very resources are distributed in a decentralized manner in the form of wholesale trade, bonuses and so forth. In any case the scale of these resources cannot be decisive and, moreover, are regulated according to the purposes of use. If we look at the situation with the introduction of the standardized system of distributing the profit from this standpoint, the causes of its slow dissemination, in addition to the inertia of thinking, have a number of objective prerequisites, I would say prerequisites of an external and internal order, that is, which lie in other links of the planning of the national economy, on the one hand, and in the system itself, on the other.

Among the external causes the practical absence of a stable five-year, and in a number of instances an annual plan of production and capital construction is the most important one. Moreover, the amounts of the deviations in the individual links--sectors, associations, enterprises--are very significant. It is worth recalling that on the scale of the country it is not always possible to take everything into account in the annual and especially the five-year plan. For example, the influence of weather conditions, the international situation and so forth. The creation of reserves also has its own optimum boundaries, beyond which they turn from a benefit into a negative factor, since the resources withdrawn from circulation moderate the possible rate of development of the economy. By this I do not wish to say that everything has already been done for the stability of the plans. No. There are still many unsolved problems in this area. But precisely owing to their existence the standardized system of distributing the profit, which surrounds to a certain extent the economic mechanism, turned out to be as if a building without a solid foundation. Not without reason did even the Ministry of Instrument Making, Automation Equipment and Control Systems not have stable standards for the five-year plan, while other machine builders made a recalculation with the budget at the end of or in accordance with the results of the year with a deviation from the standards.

Consequently, in the system itself the factors and conditions, which permit and regulate the deviations from the initially made decisions, a differentiated approach and a precise framework of these deviations should be thought out. The development of the economy is a dynamic process, which requires a flexible approach, and the attempts to place it in a once and for all set scheme, volumes, limits and so forth can only harm the matter and are doomed in advance to fail. A system is a system only when it determines the direction of the behavior of people in various situations, while constantly aiming them in the desired direction. The standardized system of distributing the profit for the present still does not conform to this task. For example, it does not envisage any decisions during the fulfillment of the five-year plan, which cause a decrease of the profit of the enterprise, although they do provide a national economic impact. Obviously the formula--everything should be envisaged in advance--comes into action. Life suggests that this is not always correct, since it checks the implementation of progressive decisions, by transferring them to the superior levels of management.

The fact that the sectors and associations, which have changed over to the standardized method of distributing the profit, are as if provisions in terms of the system, being inseparably connected with their contractors, who are under the old conditions and therefore in a more favorable position, also acts as an external factor. They are in no hurry to change over to the new system, citing so-called objective reasons--the new wholesale prices, the specific nature and so forth. The main reason, in our opinion, consists in the fact that in the case of the instability of the plans the standardized system of distributing the profit in the existing version is faced in only one direction. It envisages strict responsibility, but does not contain real stimuli. In order to understand this, it is sufficient to attempt to answer the question, what can sectors, associations and enterprises do under the conditions of the standardized system, what problems can they solved, which they could not solve under the old conditions? Is it possible to use a portion of the profit, which is left in accordance with the norm to the management due to redistribution, the overfulfillment, the saving and similar measures, for additional expenditures for the development of production, individual or collective stimulation, the solution of social problems and so on? The answer in all cases will be unequivocal--no, it is impossible. All these questions and the amount of resources are governed by special statutes on the formation of various economic stimulation funds and on the crediting and use of amortization, by numerous statutes and systems of the payment of bonuses, by the limits of capital investments and contract work, by funds and so forth, since the funds, bonuses, limits and so forth are formed, allocated and put to use in accordance with their own procedure on the basis of special criteria, which are peculiar to each of these objects of management and at the same time are common to all sectors, associations and enterprises regardless of whether or not they operate in accordance with the standardized system of distributing the profit. The stimuli consist only in the possibility of replenishing the working capital as the need arises. But for a well-operating enterprise this question reduces to only one thing--is it worthwhile to substitute for internal capital credit, the interest on which is already taken into account in the plan of the distribution of the profit?

Hence the conclusion suggests itself that for the introduction of the standardized system of distributing the profit it is also necessary to change over to direct standards from the profit, which is left at the disposal of the collective, the meeting of its specific needs. It is possible to regulate them in combination--the reproduction of fixed and working capital, social development, individual and collective stimulation, other needs. Here it is necessary to establish a rigid hierarchy of the meeting of these needs within the limits of the planned amounts and in the case of the exceeding of the plan, to make it the duty of planning and distributing organs to ensure the allocation of resources in conformity with their competence on the basis of the amount of monetary assets being formed, to abolish the mandatory nature of the statutes and systems, which specify the stimulation of labor, having lent them the nature of recommendations or if only to provide the right of adjustment within specific limits. Only then will the system operate in both directions. Here one should think about the line of behavior in instances when the deviations from the plan exceed 5-10 percent. It is hardly possible to believe that such deviations are due only to mismanagement, the lack of organization and similar causes and here a general rigid policy should be in effect. Such an approach can only do harm, since the factor of punishment of the collective not for poor work, but for the fact that it was not able to make up for the harm from outside by its own forces and resources with an increase of labor efforts, will be added to the external causes. The situation: less pay for more labor, will arise. The exceeding of the plan of the profit by more than 5-10 percent, in our opinion, may attest only to the low quality of this plan.

For the sectors, which pay the turnover tax, the problem of the coordination and mobility of the net income under the conditions of the standardized system of distributing the profit between the profit and the turnover tax, especially in the case of a vast grouped products list and a high level of taxation, is also urgent. It is obvious that when standards of the distribution of the profit for the five-year plan exist, the system will aim at the exclusion during the drafting of the annual plans and their fulfillment of taxable goods and, consequently, mainly more profitable goods for the national economy in favor of goods with a relatively low level of cost accounting profitability. Consequently, the mechanism of the inclusion of the turnover tax in the cost accounting interests is needed. Today it is limited in practice only to the right under specific conditions to use a portion of the turnover tax for the repayment of bank loans. The need for this is also confirmed by the practical experience of the Ministry of Instrument Making, Automation Equipment and Control Systems, which was twice forced to raise and to settle centrally such a question. This is not a simple problem, since differences exist in the system of the levying of the turnover tax, its planning is organized mainly in conformity with the place of receipt, that is, by territory, and only on a limited scale in conformity with the distribution by sectors. But it is necessary to work on it.

The objectively necessary differences in the conditions of the standardized system of distributing the profit in the case of its use for the sector as a whole and under the conditions of the establishment of standards for associations and enterprises are also an important question which awaits settlement. This is our chronic disease--the lack of the clear differentiated regulation of the approach to the intrasectorial redistribution of resources. In essence, the complete independence of ministries, which is limited only by standardized acts on the interrelations with the budget and banks, which, incidentally, do not take this specific feature into account, is observed here. Meanwhile the scale of the intrasectorial redistribution is very large and its influence is indisputable. However, even the question of how to determine the amount of the payments to the budget--according to the balance of the profit of the ministry or according to the results of each enterprise separately--is being debated to this day. This problem is growing even more acute today in connection with the fact that the question of the interrelations with the budget is being formulated as the question of the interrelations with something uniform and depersonalized. Meanwhile, the USSR State Budget includes nearly 55,000 budgets and also represents a system, with its own rights and obligations, which are different in scale and content at different levels. At the same time the procedure of establishing and regulating the interrelations within the budgetary system in connection with the standardized system of distributing the profit has not undergone changes and in no way takes it into account. But the need for such regulations of behavior is increasing more and more as the republic economy is changed over to the standardized system and standards are established for associations and enterprises. Differences in the approaches to the union, republic and local economy in the case of the standardized system on the part of various financial organs are already visible now. Apparently, these questions also require prompt settlement in the shortest possible time. It is impossible to introduce the system and to create the mechanism of its functioning after introduction.

There are also other questions. But these, in my opinion, are the fundamental, basic ones. Without their settlement the introduction itself will be of a formal nature and it will hardly be possible to count on obtaining a major impact.

V. N. Isavnina, chief of the Finance Administration of the USSR Ministry of Light Industry. The stability of the plan of the profit for the five-year plan and during the year and the coordination of this plan with the other plan indicators, that is, the balance of the plans, is one of the basic conditions of the successful changeover to the standardized method.

Light industry is experiencing serious difficulties in connection with the shortage of agricultural raw materials and the insufficient deliveries of chemical fibers and filaments by enterprises of the Ministry of the Chemical Industry. Adjustments are being made in the plan of sales in wholesale prices and the plan of the profit without a change of the interrelations with the budget.

The question of the lack of balance of the plan of capital construction, which finds expression in the lack of coordination between the capital being allocated for equipment and the assets envisaged for these purposes in the amount of capital investments, is also serious. All this is creating additional difficulties in the settlements with the budget, Gosbank and suppliers.

Nevertheless in the USSR Ministry of Light Industry much work is being carried out on the preparation for the changeover to the standardized method of distributing the profit. The wholesale prices for the products of all the sectors of light industry have been revised. In the new prices the more complete reflection of the economically sound expenditures on the production of output has been ensured and the unjustified differences in the level of profitability of its individual types and groups have been eliminated. The role of prices in the stimulation of the enlargement of the assortment of items in conformity with the demand of the population, in the improvement of their quality and the increase of the output of goods for children has been increased. The conditions have been created for the improvement of the cost accounting activity of production associations and enterprises. The practice of using the standardized methods of setting prices and introducing standardized parametric price lists has been expanded.

For the increase of the economic interest of associations and enterprises in increasing production efficiency and product quality norms of the profitability with their differentiation according to the grouped assortment of each specific sector have been incorporated in the prices and, moreover, norms of the profitability, which stimulate the use of advanced technology, new equipment, materials and types of finishes, have been established. This is creating the prerequisites for the changeover of the sector to the standardized method. A number of measures on mobilizing the internal economic reserves of the increase of the efficiency of the work of the sector are being implemented.

The decision has been made to change over to the standardized method of distributing the profit starting in 1983 the Lithuanian SSR Ministry of Light Industry and the All-Union Production Association of the Fur Industry, which have been operating stably. An all-union conference, which was devoted to the progress of the preparation of enterprises for the changeover to the standardized method, was held in May of this year in Lithuania.

In the Lithuanian SSR Ministry of Light Industry all the enterprises of the ministry with decentralized settlements with the state budget with respect to payments from the profit will be changed over to the new method, which will create to a greater extent an interest in better work and will increase the responsibility for the results of activity.

S. M. Miroshchenko, chief of the State Revenues Administration and member of the Collegium of the USSR Ministry of Finance. Among the measures, which are outlined by Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers, an important place belongs to the standardized method of distributing the profit. However, when discussing only this question and noting the individual shortcomings which are occurring in the practical use, it would be incorrect to draw the conclusion that the method itself is functioning inadequately. It meets all the demands which are made on the management of the economic operations of the socialist industrial enterprise.

When we examine the question of the distribution of the profit in isolation and analyze the shortcomings which occur in its practical use, we "seize" some one thing from the overall system of measures which are outlined by the decree. It seems to us that it should be examined with allowance made for the realization of the other provisions of the decree. The other provisions of the decree create a firm basis to settle favorably the ultimate question of the interrelations of the economy with the budget and the use of the standardized method of distributing the profit. And when we speak only of the distribution and redistribution of the profit, we are making a mistake. It is incorrect to view the prospects of the introduction of the standardized method only from the standpoint of the established production indicators in the case of the nonfulfillment of the other requirements of the decree. Why is the new method so far not fully operational? Because there has been no preliminary preparation for its implementation.

Industrial enterprises in a number of instances are not certain that they will receive the raw materials and materials, which are necessary for them, while the shortcomings in supply may adversely affect their economic and financial activity. If ministries, departments and industrial enterprises at the beginning of the year had the guarantee that they would receive the necessary raw materials and materials and a number of other organizational measures would be implemented, the standardized method would "work." With the settlement of all these questions the economic, financial and production activeness of industrial enterprises would certainly increase.

Some economists speak of the need to conduct a preliminary experiment on the changeover of enterprises to the new conditions of management. Here a question arises: What is to be changed over, industrial enterprises or ministries as a whole?

It seems advisable to carry out the changeover to the new conditions of operation of the ministry as a whole, all its enterprises and associations. When a ministry introduces the new method at a single enterprise or association, it creates favorable operating conditions for it. In this case, of course, the industrial enterprise will operate well. However, this still does not mean that the entire ministry will be ready for the changeover. In order to change over to the new methods of management, it is necessary to prepare the industrial enterprises and the ministry as a whole in advance for the changeover.

What procedure of settlements--centralized or decentralized--with respect to the payments from the profit conforms more to the new method of distributing the profit, increases the responsibility for the results of activity and provides the conditions for the monitoring on the part of financial organs of the financial and economic activity of enterprises? This question is not new, it has been repeatedly discussed. It seems to us that the decentralized procedure of settlements with the budget meets all these requirements, it is in keeping with cost accounting and the task of improving the activity of industrial enterprises. In the case of the decentralized procedure tens of thousands of workers of financial organs, who carry out the monitoring of the operation of industrial enterprises, participate in the settlements. Whether poorly or well, they help the enterprises to understand the shortcomings in financial and economic activity. Recommendations on how to eliminate the shortcomings and to work better are given on the basis of the analysis of the activity of industrial enterprises by the financial organs at their location.

The requirement of the guarantee of payments to the budget from the profit raises doubt for some comrades. If the enterprise operates normally and all the requirements of the decree of the CPSU Central Committee and the USSR Council of Ministers are met, the guarantee will also be observed. This will make it possible to find the correct prospect and to increase the responsibility of industrial enterprises and the ministry as a whole.

Candidate of Economic Sciences V. A. Rayevskiy, chief of the Light and Food Industry Financing Administration of the USSR Ministry of Finance. It seems to me that the principles of the functioning of the system of distribution should be common if not for all the sectors of the national economy, then if only for industry, since this system influences the formation of the economy of a sector to the same extent as the organization of prices or accounting. Therefore, the new procedure must be improved with allowance made for the practical conditions of the operation of industry.

There are instructions on the procedure of changing over to cost accounting conditions of activity, in which the preliminary work, which should be performed in the area of the improvement of the methods and practice of planning, capital investments, finance, labor and wages, is specified quite clearly. Can we confidently say that in all instances before the changeover of the corresponding ministries we carried out the necessary work? Unfortunately, we cannot, and the available experience confirms this.

It is quite clear why the question of the strengthening of the role of long-range plans and the continuity of long-range and annual plans is pointedly posed in the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979. But if we do not pose the task that the five-year plan from the point of view of its detailed elaboration should correspond to the annual plan, it is difficult to speak of approved financial indicators, stable standards and so on. The number of factors has a much greater influence on the formation of financial indicators than on the physical and volumetric value indicators. Accordingly the financial plans of sectors for the five-year plan can hardly be stable. It is possible in the end to make some calculations of the assets, for example, but it is impossible to draw the immense system into the work which does not bear any official load. The standard method of compiling the 5-year financial plans of enterprises has already been in effect for 10 years, but I have not heard that anyone would really use it.

We have a main principle which was always regarded as an advantage of our planning: if specific tasks on development are set for an enterprise, they are backed by its own assets, the assets of the superior organization and budgetary assets. This is also the financial prospect for the sector.

It seems to me that it is possible to examine the possibilities of a positive effect of the standardized procedure on the results of work within the framework of a 1-year period. What is new here? The distribution of the above-plan profit, the guaranteed amount of the payments to the budget and the peculiarities of the levying of the fee for capital.

The need to pay the guaranteed amount increases the responsibility not only for the fulfillment of the plan assignments, but, what is even more important, for the quality of the plan itself. The superior organization should imagine the consequences of unsound planning decisions for the financial situation of the subordinate enterprises in the future. But, on the other hand, we should not forget about the reality of today. When we take a guaranteed payment under the conditions of the lack of balance of the plans of production and its material and technical supply, under which specific associations and enterprises frequently operate, we violate the principle of the coordination of finances with the production indicators, since the harm for the financial state of the economy at times is such that the settlements and the normal financial backing of the fulfillment of the production assignments are upset. And as a result we are agreeing to an actual deviation from the principle we declared of collecting a guaranteed payment.

We can validly criticize the enterprises of light and the food industry for the quality and assortment of products, but at the same time we realize that their volumetric and financial indicators to a considerable extent are not fulfilled owing to circumstances which lie outside the sphere of real influence on them: they depend on the quantity and quality of agricultural raw materials. In order not to complicate the problem of the subsequent improvement of the financial state of the economy, it would be advisable that if in the case of the nonfulfillment of the plan of the profit the standard nevertheless was in effect, the guaranteed payment would not be collected. Otherwise it turns out that, except for the ideal case of the fulfillment of the plan "ruble for ruble," the standard of the distribution of the profit in practice does not have an effect.

Why do ministries not extend the standard to enterprise? The answer is clear. If the ministries, which are changing over to the new conditions as an experiment, hoped to avoid the annual revision of their financial plans, they did not at all want such a situation for their enterprises. We know from practice the drawbacks of the intrasectorial, at times inefficient redistribution of resources. But often we are also faced with unplanned redistribution. In this connection the following question is of some interest: Are we acting properly when we formulate the standard at the level of the sector, making the subsequent substantial redistribution of assets inevitable? As a result, as we know, at times credit is even repaid by means of the assets of another enterprise. What is left in this case of the cost accounting principles of the extension of credit? Once we have prosed the task of extending the standard to the enterprise, it must also be formulated there. But let the standard for the ministry, if it is needed, be formulated as the result of calculations.

The experience of using the standardized method in the sectors of the food industry is minor and its results are ambiguous. In those ministries, which fulfilled the plans, the fulfillment of the assignments for the enterprises as a whole improved. It is possible to speak of the more correct distribution of the plan assignments. But wherever the plan was not fulfilled, individual associations and enterprises have been placed in a difficult financial situation, and in order to straighten it out it is necessary to resort to the redistribution of assets at the expense of those enterprises which coped with the assignments. This is hardly correct from the point of view of cost accounting. Therefore, it is also proposed to make more precise the procedure of payments to the budget in the case of the nonfulfillment of the plan on the profit. Moreover, it seems to me, one must not get carried away by the changeover of individual associations to the new procedure. In this case there is the possibility of creating favorable conditions for them from the point of view of the balance of the plans at the expense of others. The ministries must be changed over. Even if for the present it is the republic ministries. And of course, after the implementation of the additional measures, about which we have spoken and which are envisaged in the corresponding documents.

Yu. M. Artemov summarized the roundtable discussion. He noted that all the statements were interesting, various points of view had been expressed, although it is not possible to agree with all of them.

The discussion showed that important work on the introduction of the standardized method of distributing the profit lies ahead. The speakers were of the unanimous opinion that since this method is a part of the entire comprehensive set of measures on the improvement of the economic mechanism, the changeover to the new procedure of distributing the profit can yield the greatest impact in the case of the simultaneous introduction of all the remaining elements which are envisaged by Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers.

The experience of the ministries, which are already working in accordance with this method, attests that it is necessary to prepare carefully for work under the new conditions so that the changeover would yield the greatest impact.

Some provisions must also be improved, they must be changed and differentiated with allowance made for the sectorial peculiarities. This concerns first of all the extractive sectors of industry.

The majority of the comrades who spoke justly emphasized that it is most correct to change over to the standardized method not individual associations and enterprises, but ministries (union or republic) as a whole with all the subordinate units. To accomplish this it is necessary to improve the cost accounting relations between the ministry and the industrial associations and enterprises belonging to it with allowance made for the now existing great intrasectorial redistribution of resources.

The importance of settling the question of the procedure of settlements with the budget with respect to the payments from the profit was noted. The decentralized procedure is more closely connected with the cost accounting of associations (enterprises) and makes it possible to involve more thoroughly in the economic work with them the workers of the financial organs at the location of the enterprises.

The question of ensuring the greater interest of ministries and enterprises in the increase of the profit, especially in the case of the exceeding of the plan, which in many ways depends on the stability of the standards, was also raised.

The standardized method, to be sure, is more perfect as compared with the existing system of the distribution of the profit. Its introduction will serve the further increase of production efficiency.

The held discussion showed that it is advisable henceforth to meet at the round-table on urgent problems. The editorial board thanks all the comrades who took part in the meeting.

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ECONOMIC STRIDES OF USSR SUMMARIZED

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[Article by V. Negrutsa, department chief of USSR Gosplan: "The Building and Functioning of the Unified National Economic Complex"]

[Text] On the 60th Anniversary of Formation of the Union of Soviet Socialist Republics our country stands before the entire world as a unified family of equal republics jointly building their bright future.

The Communist Party has always attributed paramount importance to relations among the nationalities. On the basis of the principles of Lenin's nationality policy it thoroughly substantiated the need for voluntary unification of the Soviet republics to form a single union in order to perform the immediate and long-range tasks of political, economic and cultural construction. Along with the main task of protecting the homeland against infringements on its independence from the camp of imperialism, consolidation of the resources of the Soviet republics was dictated by the need to create the economic prerequisites for accelerated economic development. And the success achieved by the USSR in the 60 years of its socioeconomic and political development stands as vivid evidence of the triumph of Lenin's nationality policy conducted by the CPSU.

A huge economic potential has been built up in our country; its basis consists of a mighty multisector industry and large-scale socialist agriculture, advanced science and culture, and skilled personnel. The prosperity of the Soviet people has been rising steadily on that basis. Between 1913 and 1979 fixed productive capital in all sectors of the USSR economy increased 39-fold, the gross social product grew 67-fold, the national income produced grew 73-fold, and the volume of output of the entire industrial sector increased 157-fold. In just the years of the 8th, 9th and 10th Five-Year Plans about 5,000 large industrial enterprises were built in the country.

The Soviet Union occupies first place in the world with respect to the smelting of iron and steel, production of petroleum, and the output of tractors, agricultural machines, metal-cutting machine tools, diesel locomotives and many other important industrial products. At the present time the USSR is producing 20 percent of world industrial output--more than was produced in 1950 in all the countries of the world taken together.

Between 1951 and 1980 there was a substantial increase in the share of the USSR in world production of many aspects of industrial output: electric power from 9.2 to 15.5 percent, petroleum (including gas condensate) from 7.3 to 20.2 percent, gas from 3 to 29.5 percent, steel from 14.2 to 20.7 percent, and manufactured fertilizers from 8 to 20.2 percent. Those sectors which determine technical progress to the greatest degree have been developing at a faster pace: the electric power industry, the chemical and petrochemical industry, and machinebuilding. The relative share of these three sectors in the total volume of industrial output increased from 24.3 percent in 1965 to 38 percent in 1980.

Significant qualitative changes have been achieved in the country's productive and scientific-technical potential. The power-labor ratio in industry almost doubled between 1966 and 1980, while in agriculture it tripled. There was a rise in the level of complete mechanization and automation of production; and the share of manual, low-skill and heavy physical labor decreased. Major steps have been taken to improve utilization of the plant and equipment that has been created through the retooling and reconstruction of existing enterprises, especially in the European part of the country and in the Urals. This has made it possible to substantially increase labor productivity.

Large shifts have taken place in agriculture. In just the 1971-1980 period more than 300 billion rubles were committed to the development of this sector and to strengthening its plant and equipment, including more than 170 billion rubles in the 10th Five-Year Plan, or 27 percent of the total volume of capital investments in the national economy. There has been a substantial rise in the level of chemicalization, reclamation and full mechanization in agriculture.

Transportation has undergone further development, and its plant and equipment have been bolstered. We should especially note the building of the Baykal--Amur Main Rail Line and extensive construction of large petroleum and gas pipelines over the last 10-15 years to transport fuel from the country's eastern regions to its European regions and to the Urals.

Soviet science, which is becoming a productive force in its own right, has achieved major successes. The advances of Soviet scientists are especially great in explorations of space, the development of nuclear power engineering, laser technology, the building of large hydroturbines, one-of-a-kind machine tools, a number of chemical products, and so on.

A substantial rise in the material and cultural level of living of the Soviet people has been achieved on the basis of ever broader application of the advances of science and technology, dynamic economic development, and a rise in the efficiency of the economy. Over a 15-year period (1966-1980) real personal income almost doubled, and the output of consumer goods increased 3.5-fold. In those years housing was built in the amount of 1,600 million square meters of floor space, so that 150 million persons were able to improve their housing situation. Social consumption funds increased almost 2.8-fold--from 41.9 million rubles in 1965 to 116 billion rubles in 1980.

The mighty economic potential that has been built and the higher qualitative level of social production have made it possible to achieve stable rates of expanded reproduction and a steady rise in the prosperity of the Soviet people.

The decree of the CPSU Central Committee entitled "On the 60th Anniversary of Formation of the Union of Soviet Socialist Republics" observes: "The peoples of the country of soviets have become convinced through their own experience that coming together into a single union augments their forces and speeds up socioeconomic development. We have a right to be proud that the peoples of the former outlying ethnic districts, previously condemned to age-old backwardness, have confidently crossed the threshold into the socialist future shoulder to shoulder with the workers of all the country's nationalities, bypassing capitalism and attaining the heights of social progress."

Tsarism, which conducted a colonial policy, intentionally held back the industrial development of most of the ethnic regions where 57 percent of the country's population lived. More than 67 percent of the entire output of the manufacturing and mining industries was produced in the Central, Southern, Petersburg and Baltic Economic Regions. At the same time the enormous area of Siberia accounted for 2.2 percent and Turkestan 2 percent of industrial output. Central Asia and Kazakhstan stood at the level of the colonial countries in their economic development. Many regions of the Transcaucasus and even Belorussia, which is close to the industrial center of Russia, were economically backward.

With the triumph of the Great October Socialist Revolution in our country the course was adopted of accelerated economic and social development of the backward regions of Russia on the basis of the principles of socialist location of the productive forces, which V. I. Lenin formulated as early as 1918 in "Sketch of the Plan of Scientific-Technical Projects." The essence of these principles came down to the proposition that location of the productive forces must promote an all-out economy of social labor by bringing production closer to the sources of raw materials and to regions where the finished product is consumed. This kind of location of the productive forces was aimed at ensuring the most effective specialization of the country's economic regions, comprehensive development of their economies, improvement of interregional relations and ultimately equalization of the levels of development of all the union republics and a rise in the efficiency of social labor.

Creating industrial centers in the previously backward districts with maximum involvement of the local population was an important step toward performing these tasks. A number of factories and plants were moved into the republics of the Transcaucasus, Central Asia and Kazakhstan from the central areas of Russia. In the first years of Soviet power all the regions of our country were in need of large appropriations for capital construction, but the government paid particular attention to development of the productive forces of the backward regions first of all. For instance, as early as 1918 Turkestan was allocated 50 million rubles in order to develop cottongrowing and to carry out irrigation projects. In 1923 the decision was made to grant loans to the Tiflis Executive Committee in the amount of 750,000 rubles in gold to build a power station. Expenditures involved in the accelerated development of the productive forces in the backward republics were covered with subsidies from the all-union fund.

Thanks to successful fulfillment of the prewar and postwar 5-year plans, all the union republics have accomplished a rapid rise to the most forward outposts of economic and social development and scientific-technical progress. As noted in the decree of the CPSU Central Committee entitled "On the 60th Anniversary of Formation of the Union of Soviet Socialist Republics," the world-historical triumph of the Soviet people--building an advanced socialist society in the USSR--was "the result of the revolutionary-transforming activity of peoples who rallied together under the leadership of the Communist Party to form the Union of Soviet Socialist Republics."

Performance of a complicated task in a historically short period of time--equalizing the levels of economic and social development of the republics--guaranteed the successful development of all the republics with accelerated rates of development of those which had been most backward in the past. Now in all republics the industrial sector is furnishing at least half of the gross social product, and in many two-thirds. Industry also occupies first place in the national income of the union republics. Consequently, all the republics are not characterized by the industrial-agricultural type of economy. Moreover, the progressive branches of industry--the electric power industry, machinebuilding and the chemical industry--have an ever increasing share. Differences which previously existed among the economic regions in their per capita industrial output, national income and other indicators have by and large been eliminated.

Thanks to the rapid pace of industrial development of the ethnic regions which were previously backward, their share in the USSR's entire output of industrial products has increased substantially. For instance, Kazakhstan's relative share in the country's industrial output has tripled since 1913.

Equalizing the levels of development of the republics and economic regions of our country has taken place at the same time with the scientifically sound regional division of labor. In tsarist Russia the division of labor between Central Russia and its outlying ethnic districts was exploitative in nature: the outlying ethnic districts of Russia were regarded as suppliers of raw materials processed in the Center. In the context of socialist society the division of labor takes on a fundamentally different character and becomes a process more and more subject to plan. It is the result of the socialist location of the productive forces and--in a multinational state like the USSR--of Leninist nationality policy as well.

The planned regional division of labor was an important condition for shaping and developing the unified national economic complex, which is the economic basis that unifies the interests of every union republic with the higher interests of the state as a whole. The interrepublic division of labor does not contradict the comprehensive economic development of the union republics, since the comprehensive economic development of each of them does not signify any aspiration toward the universal development of all sectors of industry and agriculture. On the basis of the tasks of raising the efficiency of social production, the specialization of the union republics is achieved by intensive development in them of primarily those sectors of the economy for whose growth they have the most favorable natural and economic conditions. For instance, while those sectors that determine scientific-technical progress (the chemical industry, electric power, machinebuilding, etc.) have been developing very rapidly, UzSSR has still retained its principal specialization--cottongrowing. The output of raw cotton increased from 522,000 tons in 1913 to 6,237,000 tons in 1980. Uzbekistan is also the principal producer of agricultural machines for cottongrowing. To renounce that kind of specialization would signify a restriction on production, which under the existing conditions is most advantageous both for Uzbekistan and also for the entire country as a whole.

The optimum combination of comprehensive economic development of the republics with their specialization makes it possible to satisfy most effectively the needs of the particular republic both through local production and also products brought in from outside. For example, the Ukraine delivers to the other republics the products of ferrous metallurgy, tractors, sugar, meat and other industrial and agricultural goods. At the same time it receives from RSFSR turbines, electric motors, motor vehicles, machine tools, textiles and timber; from the republics of Central Asia, the Transcaucasus and Kazakhstan cotton, petroleum, petroleum products, nonferrous metals, citrus fruit and tea; from the Baltic republics--railroad cars, radio equipment, computer equipment and other products; from Belorussia--tractors, trucks and timber. This kind of interrepublic exchange is economically justified and mutually beneficial.

The experience of building socialism in the USSR demonstrates that the flowering of the economy and culture of the union and autonomous republics is achieved not through exclusiveness and separateness of nationalities, but as a result of their harmonious development and mutual enrichment in the fraternal family of socialist nationalities and peoples, and unification of their economy to form the unified national economic complex. It embraces all units of social production, distribution and exchange within the country, all sectors and economic regions, and it is shaped on the basis of the common interests of all the nationalities. "The unified national economic complex of the Soviet Union which has taken shape," L. I. Brezhnev has pointed out, "stands as the economic foundation which unifies the interests of all the nationalities in our country. It is in concert, relying on their mutual aid, enriching one another with the values of the science and culture of their respective nationality, that they are capable of advancing most successfully along the road of building communism."*

The high level of economic and social development achieved by the Soviet republics is the result of fraternal aid and cooperation. The construction of the Turksib [Turkestan--Siberian Railroad], development of virgin land, creation of the petroleum industry in Tataria and Bashkiria, the rebuilding of Tashkent after it was destroyed by the earthquake--this list of examples of fraternity and friendship of the nationalities of the Soviet Union is by no means complete. In our time a new source of petroleum and gas has been created and is developing in the north of West Siberia, the large-scale motor vehicle building complexes KamAZ [Kama Motor Vehicle Plant] and VAZ [Volga Motor Vehicle Plant] have been built, and the BAM [Baykal--Amur Main Rail Line] is being built successfully through the energies of all the union republics and representatives of all the Soviet nationalities.

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* L. I. Brezhnev, "Leninskim kursom" [On Lenin's Course], Vol 2, Moscow, Politizdat, 1973, pp 535-536.

RSFSR plays the decisive role in the fraternal cooperation of all the country's nationalities and ethnic minorities. With its multisector and dynamically developing economy the Russian republic is the largest component of the unified national economic complex of the USSR. The economy of Soviet Russia is the nucleus of the multinational union economy by virtue of the scale and volume of its physical production and its reserves of natural resources.

RSFSR accounts for a sizable portion of the industrial products manufactured in the country and almost half of the gross output of agriculture. At the present time 62 percent of the electric power generated in the country, 90 percent of the petroleum produced, 62 percent of the gas, 54 percent of the coal, 50 percent of the pig iron smelted, 56 percent of the steel, and 57 percent of the rolled products of ferrous metals are produced within the republic. In 1980 the output of electric power was 620-fold greater than in 1913; the capacity of all the republic's power stations amounted to 165 million kw. In just the years of the 10th Five-Year Plan it increased by 33 million kw.

As the economic development of the industrial regions that have taken shape continues, the extremely abundant natural resources of new regions are being drawn into economic circulation at a faster pace. The economic potential of Siberia and the Far East has been built in almost its entirety in the years of Soviet power. The possibilities of these regions for development of a mighty source of electric power are very great. One-of-a-kind hydroelectric power stations have been built on the Yenisey and Angara--the Krasnoyarskaya (6 million kw), the Sayano-Shushenskaya (6.5 million kw) and the Bratskaya (4.1 million kw). Production of electric power in Siberia and the Far East has surpassed 240 billion kwh per year. The eastern regions of RSFSR account for more than half of the petroleum produced in the country, more than two-fifths of the gas and more than one-third of the coal. A highly advanced multisector industry has been built here. These regions also play an important role in the development of the chemical industry, nonferrous metallurgy and machine-building.

RSFSR has great importance in the nationwide production of farm products, whose volume in 1980 was 2.4-fold greater than in 1940. The republic's share is 56 percent of the grain produced in the country, 50 percent of the potatoes, 50 percent of the meat, 52 percent of the milk and 48 percent of the wool.

The republic's economic specialization in production of the products of the most important sectors of the manufacturing and extractive industries and the sizable relative share of the output of these industrial sectors in the USSR determine the principal role which Soviet Russia has in interrepublic exchange and in the delivery of products for export. RSFSR ships to the other union republics 12 percent of the machines and industrial equipment produced within it, 13 percent of the output of the timber, woodworking and pulp and paper industry, 15 percent of the output of the chemical and petrochemical industry, 20 percent of products made from cotton fabrics and about 30 percent of those made from silk fabrics, and a sizable quantity of grain. At the same time the Russian Federation satisfies about 15 percent of its own needs for iron ore and ferrous metals from the other union republics, 10 percent of its needs for chemical products, 100 percent of its cotton, and a large share of its needs for sugar, grape wine, canned fruits and vegetables and tobacco products.

The Ukraine, which is the Soviet Union's center for coal and metallurgy, has in the years of Soviet power become one of the important centers of the fuel and power industry, machinebuilding, the chemical industry and the food industry. Construction of a series of hydroelectric power stations has been completed on the Dnepr (the Kiyevskaya, Kanevskaya, Kremenchugskaya, Dneprodzerzhinskaya, Dnepropetrovskaya and Kakhovskaya); large thermal electric power stations have been built (the Krivorogskaya, Znamenskaya, Pridneproprovskaya, Starobeshevskaya, Slavyanskaya and Burshtynskaya); and nuclear power stations are being built (the Rovenskaya, Chernobylskaya, Yuzhno-Ukrainskaya, Khmel'nitskaya, Zaporozhskaya and Krymskaya).

In 1980 472-fold more electric power was generated in UkSSR than in 1913. It occupies one of the leading places in the country with respect to the mining of iron ore, the smelting of iron and steel, and production of rolled products of ferrous metals. The largest enterprises in ferrous metallurgy are in operation here: the "Azovstal'" Plant, the Plant imeni Il'ich, the Krivoy Rog Plant, the Nikopol Southern Pipe Plant, the Avdeyevka and Gorlovka Coke and Chemical Plants, etc.

Large underground coal mines have been built in the Donbass with a high level of mechanization of production processes. The chemical industry was built up almost from scratch in the republic. Such large enterprises have been built as the Gorlovka, Dneprodzerzhinsk, Severodonetsk and Rubezhnoye Chemical Combines, the Cherkassy Chemical Fiber Plant, the Dnepropetrovsk Tire Plant, fertilizer plants, and so on.

The Ukraine's machinebuilding enterprises are delivering large metallurgical equipment to other republics, turbines, generators, diesel locomotives, motor vehicles, maritime vessels, airplanes, agricultural machines, electronic computers and other products. Light industry and the food industry have undergone extensive development there. The Ukraine accounts for 52 percent of the entire national production of granulated sugar and 36 percent of the sunflower oil.

UkSSR is the country's most important source of agricultural products. In 1980 it accounted for 20 percent of the national production of grain, 59 percent of the sugar beets (for the mill), 49 percent of the sunflower seed, and 23 percent of the meat and milk.

Before the Great October Socialist Revolution Belorussia was one of the most backward districts of tsarist Russia. It was producing mainly flax fiber, hemp, lumber, tar, bristles and leather. Almost all metal products were imported. Present-day Belorussia has a multisector industry. New branches of industry have been created in the republic: the motor vehicle industry, the tractor industry, the petroleum refining and petrochemical industry, the electronics industry and the wire and cable industry. In accordance with the nationwide division of labor superheavy dump trucks, tractors, potassium fertilizers, agricultural equipment, metal-cutting machine tools, chemical fibers and other products are produced in BSSR. The products of the Minsk and Belorussian Motor Vehicle Plants, the Minsk Tractor Plant, and the Minsk Automatic Production Line Plant are widely known within our country and outside it. Belorussia occupies the leading place in the country with respect to the production of silage-harvesting combines.

In 1913 only 3 million kwh of electric power were generated in Belorussia. Today the output of electric power here is 16-fold greater than in all of tsarist Russia.

Almost half of the potassium fertilizers produced in the country are manufactured in the republic. The volume of agricultural output has increased 1.9-fold over 1940. Belorussia occupies third place in the country with respect to the production of flax, potatoes and milk, and fourth with respect to meat production.

Very great transformations have been accomplished in the economy of KaSSR. In the years of the 1st Five-Year Plan such giants were put into operation here as the Turkestan--Siberian Railroad, the underground mines of Karaganda, the Balkhash Copper Smelting Plant, the Chimkent Lead Plant, the Atkyubinsk Chemical Plant, and the Achisay and Leninogorsk Polymetallic Combines.

Soviet Kazakhstan has taken long strides forward in the postwar period. In 1980 the total volume of industrial output exceeded the 1940 level by 32-fold. Large regional industrial complexes, industrial areas and industrial parks have taken shape in the republic and are continuing to develop: the Pavlodar--Ekibastuz, the Karatau--Dzhambul, Karaganda--Temirtau, the Mangyshlak, Kustanay--Lisovka, etc. In the Karaganda and Ekibastuz Basins very large coal centers have been created. Thanks to the development of new deposits in Mangyshlak petroleum production in Kazakhstan has increased nearly 160-fold over 1913. The leading branch of industry in KaSSR is nonferrous metallurgy, which is playing an important role in the national economy of the entire country.

Electrification of the republic has paramount importance in developing Kazakhstan's natural resources. In 1980 61.5 billion kwh of electric power were generated (as against 1.3 million in 1913).

Development of more than 25 million hectares of virgin land and long-fallow land in Kazakhstan had great importance to development of the entire country's agriculture. The gross grain harvest in the republic has risen more than 12-fold since 1913. As graingrowing has continued to develop in Kazakhstan, livestock raising has been undergoing extensive development.

In the years of Soviet power the economy of the republics of Central Asia has become a multisector economy with highly developed industry and a mechanized agriculture. In the all-union division of labor this region is the principal supplier of cotton, whose production has increased more than 13-fold over 1913. This ensured not only the country's cotton independence, but it also covered the principal requirement of the European countries of the socialist commonwealth. Sericulture, raising of karakul lambs, fruitgrowing and grapegrowing, which are developing here, also have national significance.

The republics of Central Asia have achieved very great success in industrial development. The explored fuel reserves and hydropower potential led to the building of a mighty electric power capability. Large thermal electric power stations were built: the Tashkentskaya, Syrdar'inskaya, Maryyskaya, Navoiyskaya and Angrenskaya. In its hydropower potential Tajikistan is in second place after RSFSR, and Kirgizia is in third. The capacities of the Nurekskaya and Toktogul'skaya GES [hydroelectric power stations] have been put on line; these are components of series of dams being built on the Vakhsh and Naryn Rivers. Electric power production increased between 1940 and 1980 68-fold in UzSSR, 178-fold in KiSSR, 219-fold in TaSSR and 80-fold in TuSSR.

In UzSSR electronics, tractor building, the aircraft industry and the chemical industry have undergone extensive development along with those branches of industry serving the cotton complex.

In KiSSR the production of nonferrous metals, especially mercury and antimony, has developed. The republic occupies second place in the country with respect to mercury production. Industrial products--motor vehicles, agricultural equipment, electric motors, metal-cutting machine tools, and precise instruments--are being delivered not only to other union republics, but are also being exported.

In TaSSR the electric power industry, nonferrous metallurgy, the chemical industry and machinebuilding are the pacesetters in development. The electric power industry in the republic has developed at a very fast pace because of location of large-scale power-intensive projects in the republic--the Tajik Aluminum Plant and the Yavan Electrochemical Plant.

In TuSSR the petroleum refining, chemical, petrochemical, gas and other industries have been built from scratch during the years of Soviet power. The production of petroleum, gas, sulfur and sodium sulfate has national importance. The republic occupies fourth place in the country in the mining of sulfur.

Light industry and the food industry have a sizable proportion in the industrial structure of the republics of Central Asia. Large cotton, silk and carpet combines have been built.

The republics of the Transcaucasus have achieved important success in economic development. In the interrepublic division of labor Georgia's specialization is determined above all by the manganese industry, that of Azerbaijan by petroleum production, and that of Armenia by nonferrous metallurgy. The share of the chemical industry, diversified machinebuilding, electrical equipment, light industry and the food industry is substantial in the branch structure of the industrial sector of these republics. Machinebuilding enterprises are manufacturing electric locomotives, motor vehicles, metal-cutting machine tools, equipment for the textile, light, and food industries and household appliances.

A mighty electric power capability has been created in the republics of the Transcaucasus; it is based on using the energy of mountain rivers and natural gas. Now in 17 days these republics generate as much electric power as was produced by all the plants in Russia in 1913.

The gross output of agriculture in 1980 had increased as follows over 1940: fourfold in Georgia, 5.5-fold in Azerbaijan and 4.7-fold in Armenia. Georgia is the principal region for subtropical agriculture, the principal supplier of tea, and a large grape producer. Azerbaijan is specializing in the production of grapes, cotton and fruit. The main lines of development of Armenia's agriculture are in fruitgrowing and grapegrowing. The share of the republics of the Transcaucasus is 40 percent of the national production of grapes and 99 percent of the national tea production.

Moldavia has achieved large advances in its industrial and agricultural development. Its industry is today producing in one week the output that was produced in the entire year of 1940. The mighty fuel and energy capability created in the republic has contributed to the rapid growth rates of industrial production. Between 1940 and 1980 electric power production in the republic increased 780-fold. The food industry and light industry, machinebuilding and the building materials industry have experienced large development in the republic.

Among the union republics Moldavia is distinguished above all as a producer of grapes, fruit, vegetables and tobacco. It is one of the country's largest suppliers of wine, canned goods, sugar, vegetable oil and other farm products. Products produced in the republic in such branches of machinebuilding as the electrical equipment industry, instrumentmaking and agricultural machinebuilding are widely known not only in our country, but also abroad. The Baltic republics have achieved rapid rates of development. Between 1940 and 1980, while the total volume of industrial output in the country increased 21-fold, industrial production in Lithuania increased 58-fold, in Latvia 45-fold, and in Estonia 48-fold. Electric power production has increased 95-fold over 1940 in ESSR, 19-fold in Latvia and 146-fold in Lithuania. Estonia occupies first place in the country in the per capita production of electric power.

The Baltic republics participate extensively in the interrepublic division of labor, specializing in the production of the products of the radio and electrical equipment industries, the electronics industry, instrumentmaking, machine tool building, shipbuilding, the fishing industry, light industry, and the meat and dairy industry. Lithuania delivers to other regions of the country high-precision metal-cutting machine tools, drill bits, household equipment and appliances, and computers. Latvia is one of the principal producers of communications equipment, radios, streetcars, mopeds and motor bikes; it is supplying the country motor-driven cars for electric motor trains and diesel trains. Specialization of Estonia's industry is determined by the availability there of large reserves of oil shale, which was the basis for extensive development of the shale mining, shale refining and shale-chemical industry.

The agriculture of the Baltic republics specializes in beef and dairy cattle raising and the raising of bacon-type hogs. Sizable projects are being carried out to increase the area of drained land, which amounted to 5.5 million hectares in 1980.

Every union republic, in possession of an adequate economic and scientific-technical potential, is developing as an inseparable and integral part of the country's unified national economic complex and is making its contribution to building the material and technical base of communism. Creation of the statewide system of planning and management of the economy was an important condition for shaping and strengthening the unified national economic complex of the USSR. It is by means of state plans that the planned specialization and comprehensive development of the country's union republics and economic regions are ensured and production relations achieved among them.

The plan of the country's economic and social development for the 11th 5-year period calls for increasing the efficiency of social production through further specialization and proportional development of the union republics. On the basis of the need for faster and more optimum performance of the tasks of the nation, for better use of natural and labor resources and production capacities in operation and those to be added, higher rates of development of industrial production have been envisaged for certain of the union republics by the plan covering the period 1981-1985. Whereas the volume of industrial output in the country as a whole is to increase 26 percent, in MSSR the volume of industrial output will increase 32 percent, in GSSR and ArSSR 31 percent, in UzSSR and AzSSR 30 percent, in BSSR 28 percent and in TaSSR 27 percent.

The eastern regions, which possess enormous reserves of mineral raw materials, fuel and energy and other resources, will develop at an accelerated pace in order to bring the most efficient raw material resources into circulation in the national economy. There will be a sizable increase in the mining of coal by the strip method in the Pavlodar--Ekibastuz and Kansk--Achinsk Fuel and Energy Complexes and in the Kuzbass. In West Siberia petroleum production (including gas condensate) will increase to almost 400 million tons per year, gas production will exceed 350 million cubic meters. Production of electric power will increase substantially in those regions. In the current 5-year period essentially all energy- and water-intensive production operations will be located in the country's eastern region. Nonferrous metallurgy, the chemical and petrochemical industry, the fuel industry, the timber industry, the pulp and paper industry, the woodworking industry and other branches will be developing there at a faster than average pace.

In the republics of Central Asia plans call for improved use of labor resources through construction of new enterprises and a fuller load on existing production capacities. More than 20 enterprises, shops and affiliates of the all-union machinebuilding ministries will be built during the current 5-year period in UzSSR alone; investments in construction of the enterprises of light industry will increase more than twofold over the 10th Five-Year Plan.

In the European part of the country and in the Urals, in the light of the complicated demographic situation, the further growth of industrial production will be accomplished by virtue of retooling and reconstruction of existing enterprises and also improved use of the production potential that has been built. Nuclear power production will experience extensive development. Capacities will be put on line at the Smolenskaya, Kalininskaya, Kurskaya, Rostovskaya and Balakovskaya AES [nuclear power stations] in RSFSR; the Yuzhno-Ukrainskaya, Khmel'nitskaya and Rovenskaya in the Ukraine; and the Ignalinskaya AES in Lithuania. Practically the entire growth of electric power production in the European part of the country will be obtained at nuclear power plants. Development of the hydropower potential of the Northern Caucasus and Transcaucasus will continue.

In the 11th Five-Year Plan regional industrial complexes will be shaped and will undergo further development in Siberia and the Far East, as well as the Timan--Pechora, Pavlodar--Ekibastuz and Southern Tajik Regional Production Complexes and those based on the resources of the Kursk Magnetic Anomaly.

The assignments of the USSR Food Program are a most important component of the 11th Five-Year Plan. The performance of agriculture and the branches of industry, transportation and trade that serve it are closely knitted together in that program. Their entire activity is subordinated to the common ultimate goal--production of high-quality foodstuffs and their delivery to consumers. Every republic must make its contribution to solving the food problem, guaranteeing unconditional fulfillment of plans for production and purchases of agricultural products and for their delivery to the stocks of the entire union. At the same time all the republics are participating insofar as they are able in developing the material and technical base of the agroindustrial complex, enterprises of the food industry, and the food trade sector in furnishing these sectors transportation, containers and container and packing materials, and so on. Interrepublic connections in the country's agroindustrial complex are becoming considerably stronger and stouter on that basis.

In this process each of the major agricultural regions is developing harmoniously, combining the diverse directions of field cropping and animal husbandry as well as the other branches of the agroindustrial complex. For instance, in accordance with the unionwide specialization in agriculture and other sectors participating in carrying out the Food Program, UkSSR will increase deliveries to the other republics of meat, sugar, vegetable oil, fruit and berries, and canned fruit and vegetables. The republic also has an important role in supplying tractors, corn- and beet-harvesting combines and other agricultural equipment and nitrogen and potassium fertilizers to the country's agriculture.

KaSSR, where agriculture has a narrower specialization than in the Ukraine, is mainly increasing deliveries of grain and meat. Interregional deliveries of agricultural equipment and phosphorus fertilizers from Kazakhstan will increase.

Successful performance of the tasks set by the 26th party congress and the May (1982) Plenum of the CPSU Central Committee will serve the cause of strengthening the country's unified national economic complex--the physical basis of the friendship of the nationalities of the USSR. Further improvement and strengthening of the USSR's unified national economic complex is the long-range and fundamental program of the CPSU.

Lenin's idea of forming a multinational socialist state--the USSR, whose 60th anniversary the Soviet people is celebrating, has been splendidly embodied in life. The progress achieved by the Soviet republics, unified on the principles of full equality and voluntary association, their economic prosperity and the flowering of their culture stand as striking evidence of the triumph of Lenin's nationality policy, which has been consistently conducted by the Communist Party of the Soviet Union.

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CSA CHIEF SUMMARIZES ECONOMIC PROGRESS

Moscow VESTNIK STATISTIKI in Russian No 12, Dec 82 pp 6-15

[Article by L. Volodarskiy, chief of USSR Central Statistical Administration (CSA): "Living Embodiment of Lenin's Nationality Policy"]

[Text] Sixty years have passed since the date when the Union of Soviet Socialist Republics was formed. The history of humanity had not known of state structures of that kind before the triumph of the Great October Socialist Revolution. The triumph of October, establishment of public ownership of the means of production, annihilation of oppression of man by man, and implementation of Lenin's nationality policy--all this afforded the possibility of creating a single multinational Soviet state.

With the triumph of the socialist revolution in Russia an end was put once and for all to ethnic oppression, and a strong foundation was laid for the free development of all the nationalities and ethnic minorities and for their close unity and friendship.

V. I. Lenin pointed out: "We desire a voluntary alliance of the nationalities, an alliance that would not permit any sort of violence of one nationality upon another, an alliance that would be based on the fullest confidence, on clear awareness of fraternal unity, on fully voluntary consent."* The Union of Soviet Socialist Republics, the world's first multinational state of workers and peasants united into a single union--which was created by the will of the peoples of our country on 30 December 1922, became that kind of alliance.

The young state, which had not yet healed its wounds from the imperialist and civil wars and the foreign intervention, was faced with a most complicated task--to extricate itself from age-old backwardness.

The Declaration on Formation of the Union of Soviet Socialist Republics stated: "But the years of war have not passed without a trace. The devastated fields, closed plants, wrecked productive forces and exhausted economic resources which have been left as a legacy of the war make the separate efforts of the individual republics to build the economy insufficient. Economic recovery would be impossible if the republics were to exist separately."

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* Lenin, V. I., "Polnoye sobraniye sochineniy" [Complete Works], Vol 40, p 43.

As noted by L. I. Brezhnev, the history of the Union of Soviet Socialist Republics is "a history of unprecedented growth and comprehensive development of the state which was given birth by the socialist revolution and which has today become one of the mightiest states in the world. It is the history of consolidation and of a true flowering--economic, political and cultural--of all the republics that rallied under its banner and all the nationalities and ethnic minorities inhabiting the country.

Formation of the USSR was the prerequisite for conducting a single economic policy over the entire territory of the country, relying on a planned economic system and the predominance of socialist ownership.

The first USSR Constitution provided that the Union of Soviet Socialist Republics, represented by its supreme organs of government power and administration, would have the power "to establish the bases and general plans of the entire national economy...."

The GOELRO [State Commission for Electrification of Russia] Plan, in which the sectoral and regional breakdowns were organically combined, was the first scientific plan of the country's economic and social development; it reflected the principles of Lenin's nationality policy and of socialist location of the productive forces.

Both sectoral and regional planning improved, especially in 5-year plans. The very first 5-year plan contained detailed material both by economic regions and also by administrative units. As pointed out in the plan, "it was clear at the very inception of the ideas about regionalizing the Union that the nationality aspect (the principle of self-determination of nationalities in the USSR) and the principle of economic regionalization merely complement one another...."

The 1st Five-Year Plan emphasized the enormous importance of regional planning: "The USSR cannot otherwise build and develop its national economy than by fully taking into account all the natural, economic and ethnic peculiarities of its extensive association and by specializing its individual parts. Only in this way can the highest coefficient be achieved for the efficiency of social labor."

The party's economic policy took as its point of departure the need for a rapid climb by the former outlying ethnic districts and for comprehensive development of every union republic, taking into account their economic and social peculiarities and expansion of economic relations among them in order to guarantee the dynamic and effective development of the country's entire national economy.

Thus the national economy of the USSR was shaped in the direction of creating a single national economic complex.

"Integration of the economic potential and resources of all the republics," noted Comrade N. A. Tikhonov, chairman of the USSR Council of Ministers, "is speeding up the development of each of them--both large and small. Public ownership of the means of production, above all ownership by the entire people in common, and centralized planning afforded the possibility of a rational approach to location of the productive forces, guaranteed the freedom for accomplishing economic maneuvers, and made it possible to deepen the socialist division of labor, production specialization and industrial cooperation among republics.

"The high degree of centralization and concentration of all the principal resources in the hands of the state create the objective prerequisites for gradual dynamic development of the national economic complex."

The great fraternity of working people, their indestructible Leninist friendship, and the unity of the interests of all the classes and strata of our society, of all its nationalities and ethnic minorities, led by the Communist Party, have been an inexhaustible source of the constructive creativity of the masses, a solid foundation that guaranteed the extremely rapid socioeconomic progress of the USSR.

What was the USSR national economy like in 1922? In that year the gross social product and national income were half what they were in 1913, and industrial output was two-fifths of what it had been. The volume of agricultural output was five-sevenths of what it had been.

Dynamics of the Output of the Most Important Industrial and Agricultural Products, millions of tons

Products	1913	1917	1918	1919	1920	1921	1922
Electric power, billions of kwh	2.0	2.2	0.6	0.5	0.5	0.52	0.8
Petroleum (including gas condensate)	10.3	8.8	4.1	4.4	3.9	3.8	4.7
Coal	29.2	31.3	13.1	9.4	8.7	9.5	11.3
Steel	4.3	3.1	0.4	0.2	0.19	0.22	0.32
Grain	86.0	54.6	49.5	50.5	45.2	36.3	50.3
Meat (carcass weight)	5.0	4.3	4.2	4.1	2.6	3.3	2.2

In 1922 the USSR's share in world industrial output was approximately 1 percent. In spite of enormous difficulties the Communist Party resolutely adopted the course of building socialism. Year after year, from one 5-year plan to the next, the country became stronger as it carried out industrialization, the collectivization of agriculture, and the cultural revolution, and the unity of all the nationalities and ethnic minorities was tempered and strengthened. In a short time the prewar economic level had been attained, the plans of the first 5-year periods were carried out, and high economic growth rates were achieved.

The USSR has become one of the world's mightiest countries from the economic and defense standpoint, having surpassed the level of industrial output of such highly advanced capitalist countries as Great Britain, France, and Germany; the gap with the United States has been closed considerably.

Thanks to conducting the course of politics aimed at boosting the economy of all the union republics and at speeding up the development of those regions which were previously backward, even in the prewar years the economic inequality of the nationalities that existed in tsarist times was mainly overcome.

The greatness of the friendship of the nationalities was manifested with particular force in the years of the Great Patriotic War. At the front and in the rear, unselfishly, without sparing their energies, the Soviet people forged a victory over the enemy. The downfall of fascism was a historic achievement of all the nationalities of the Soviet Union and a confirmation of the greatness of Lenin's nationality policy. L. I. Brezhnev remarked: "The unity of the Soviet people found its convincing expression in the heroic exploits on behalf of defense of the socialist homeland. The union and friendship of all our country's nationalities and ethnic minorities withstood such an extremely serious test as the Great Patriotic War. In that war the sons and daughters of the unified Soviet homeland not only defended their socialist achievements with honor, but indeed saved world civilization from fascist barbarism, thereby rendering strong support to the liberation struggle of nationalities."

The loss was huge. The homeland lost about 30 percent of its national wealth, more than 20 million Soviet people.

Fraternity and mutual aid, tempered in the fiery years of the war, and the tremendous advantages of the planned system of the socialist state became the strong foundation of new accomplishments in the battle for economic recovery.

The prewar level was achieved in 1948 for industrial output and 1950 for agricultural output. Thanks to fulfillment of the 5-year plan for economic recovery our economy became considerably stronger. Between 1940 and 1950 the national income rose 1.6-fold and industrial output 1.7-fold.

Unification of the nationalities under the leadership of the Communist Party was a pledge to successful construction of an advanced socialist society possessing a mighty economic and scientific-technical potential and highly qualified personnel.

The scale of our economic development is characterized in summary form by the national income, which is the principal source of expanded socialist reproduction and the rising prosperity of the people. Between 1922 and 1981 the national income grew 1.67-fold, and the growth over 1940 was 14.6-fold. The amount of income credited to all of the year 1922 is now produced in 2.2 days.

All sectors of social production--industry, agriculture, and transportation, have now developed in the republics and regions of the huge Soviet state, and capital construction is taking place on a large scale. All the union republics have achieved an approximately equal level of development of the productive forces. This economic takeoff was ensured first of all by the very rapid development of socialist industry. In 1982 the volume of industrial output was 537-fold greater than in 1922 and 23-fold greater than in 1940. At the present time the entire output for the year 1940 is achieved in 27 days for electric power, 8 days for steel, 33 days for manufactured fertilizers, 15 days for motor vehicles, 18 days for tractors, 22 days for cement, 20 days for the production of petroleum (including gas condensate), and almost 5 months for gas.

Those sectors which to a considerable degree guarantee scientific-technical progress in the economy have been developing at high stable rates. For example, the output of machinebuilding and metal manufacturing will in the current year be 81-fold greater than in 1940, the output of the chemical and petrochemical industries 64-fold greater, and the output of electric power 35-fold greater. The volume of production of consumer goods (the output of Group B of industry) is increasing on a large scale; the amount produced in 1940 is now produced in a month.

The growth of industry has been extremely rapid in all the union republics over these 60 years.

Growth of the Total Volume of Industrial Output

Republics	1982 (plan)		Number of Days Required in 1982 To Produce Volume of Industrial Output in Respective Year	
	1922 = 1	1940 = 1	1922	1940
USSR	537	23	0.7	16
RSFSR	500	20	0.7	18
UkSSR	286	15	1.3	24
BSSR	730	32	0.5	12
UzSSR	432	18	0.9	20
KaSSR	938	34	0.4	11
GSSR	305	18	1.2	20
AzSSR	145	14	2.5	27
LiSSR		63		6
MSSR	969	56	0.4	7
LaSSR		47		8
KiSSR	712	40	0.5	9
TaSSR	898	20	0.4	19
ArSSR	1,048	50	0.4	7
TuSSR	209	12	1.7	30
ESSR		50		7

The outlying districts of prerevolutionary Russia, which served as suppliers of raw materials and agricultural products for the main industrial centers, have been transformed into highly developed industrial regions of the Soviet Union.

The republics of Central Asia and Kazakhstan are a convincing confirmation of this.

A major fuel and energy base, ferrous and nonferrous metallurgy, the chemical and petrochemical industries, machinebuilding (production of tractors, almost all types of machines for cultivating and harvesting cotton, equipment for cotton gins and spinning mills, diesels, excavators, chemical equipment and materials-handling equipment, etc.) have been built up in UzSSR.

KiSSR has a multibranch industry. Petroleum, gas and coal are being produced in the republic, as are nonferrous metals, electric motors, metal-cutting machine tools, and machines for raising livestock and production of livestock feed.

Tajikistan, which possesses huge energy resources, did not have a single electric power plant before the revolution. Now that republic generates as much electric power as did the entire Union at the end of the 1st Five-Year Plan. A large-scale multibranch industry has been created.

In TuSSR the petroleum refining, chemical and petrochemical industries have been built, as have the gas, cement, glass and canning industries, and 3.6-fold more electric power is generated than in all of prerevolutionary Russia.

Creation and development of large-scale industry in Kazakhstan are a striking confirmation of the triumph of Lenin's nationality policy. A large-scale and up-to-date industry has been built in the republic on the basis of the very abundant natural resources. KaSSR is now one of the principal centers of the country's nonferrous metallurgy. Ferrous metallurgy, the electric power industry, the coal industry, the petroleum industry, the chemical and petrochemical industry, machinebuilding, light industry and the food industry have undergone substantial development. The republic now has an industrial output that is fivefold greater than all prerevolutionary Russia.

Evaluating the very great achievements of the Central Asian republics and Kazakhstan, L. I. Brezhnev said: "Far more modest achievements are often called a 'miracle' in the capitalist world. But we communists do not see anything supernatural in the fact that this took place in Soviet Central Asia and in Soviet Kazakhstan. This is what one might call a natural miracle--natural for Soviet power, for socialism, for those relations of friendship and fraternity among nationalities which have been established in our country."

In the course of the country's industrialization its position in the world economy and in the system of peaceful economic relations altered radically. The USSR's share in world industrial output rose from 1 percent in 1922 to one-fifth at the present time. At the beginning of the 1st Five-Year Plan this country had a per capita industrial output that was 40 percent below the world average, which it now exceeds by nore than threefold.

Radical changes have taken place in agriculture. Instead of the millions of tiny peasant farms, large-scale socialist agricultural enterprises with up-to-date plant and equipment have been created in every union republic.

There is just one striking example. In the republics of Central Asia, where in the prerevolutionary period exhausting manual labor was predominant in agriculture, the power capacity per 100 hectares of plowland is now twice as great as the national average. Mechanization, chemicalization, land resource improvement, application of the advances of science to agricultural production have become a strong foundation guaranteeing a steady increase of intensification in the farm sector of our economy. All of this has made it possible, even while reducing the size of the labor force employed in the sector, to steadily increase the volume of its output. In 1981 the gross output of agriculture was 5.2-fold greater than in 1922 and 2.4-fold greater than in 1940. The entire growth of output was achieved by raising labor productivity. In the socialized sector of agriculture it increased fourfold as compared to the prewar period.

Growth of the Gross Output of Agriculture

	1981			1981	
Republics	1922 = 1	1940 = 1	Republics	1922 = 1	1940 = 1
USSR	5.2	2.4	LiSSR		2.0
RSFSR	4.1	2.3	MSSR		3.3
UkSSR	5.0	2.1	LaSSR		1.5
BSSR	5.7	2.1	KiSSR	10.8	3.8
UzSSR	11.8	4.6	TaSSR	14.2	4.4
KaSSR	12.8	7.4	ArSSR	9.7	5.3
GSSR	13.5	4.3	TuSSR	10.7	4.7
AzSSR	12.3	5.9	ESSR		1.7

The decisions of the March (1965) Plenum of the CPSU Central Committee, which laid the foundation for the present-day farm policy of the party, which is being consistently implemented, had very great importance to the development of agriculture. The May (1982) Plenum of the CPSU Central Committee set new targets in agricultural development. Its documents are just as important to the country's economic development as the historic decisions of the March (1965) Plenum of the CPSU Central Committee. The May Plenum approved the USSR Food Program for the Period up to the Year 1990, which was drafted in accordance with the decisions of the 26th CPSU Congress and which outlined an entire set of interrelated measures ensuring a substantial growth of production of agricultural products. Every republic, kray, oblast, and rayon, every sector of the economy, and all work collectives in urban and rural areas are called upon to make their maximum contribution to solving the food problem--the central problem of the party and state in the 11th and 12th Five-Year Plans.

The USSR possesses a mighty and up-to-date construction industry. The fixed capital now put into service in the average day is 1.5-fold greater than in all of 1922. In the 60 years of the USSR's existence the sum total of fixed capital put into service is 2.1 trillion rubles, and capital investments amounting to 2.2 trillion rubles have been made.

The enormous scale of capital construction has to a considerable degree promoted the growth of potential in every union republic and has helped to equalize the levels of their economic development.

Capital Investments and Fixed Capital Put Into Service by Union Republics (in comparable prices; millions of rubles)

Republics	Capital Investments			Fixed Capital Put Into Service	
	1922	1940	1981	1940	1981
USSR	249	6,433	138,818	5,901	132,596
RSFSR	156	4,326	86,964	4,050	82,857
UkSSR	51	9[illegible]7	18,970	831	18,639
BSSR	9	185	4,553	174	4,315
UzSSR	7	202	5,914	147	5,667
KaSSR	8	260	8,262	243	7,700
GSSR	6	134	1,853	118	1,767
AzSSR	6	166	2,232	137	1,935
LiSSR		2	1,743	2	1,721
MSSR	0.1	9	1,490	8	1,407
LaSSR		11	1,379	10	1,365
KiSSR	2	42	979	35	1,026
TaSSR	2	45	976	33	854
ArSSR	1	50	1,225	50	1,295
TuSSR	1	42	1,317	38	1,121
ESSR		32	814	25	766

A unified transportation system embracing all the country's republics and economic regions has been built.

As the country's economic might has grown, major social changes have taken place, and the material and cultural level of living of the workers of all union republics has risen constantly.

All the union republics have achieved approximately the same level both in the domain of development of the productive forces and also in the domain of the economic conditions of the life of the population, the social structure, public education and culture. Native detachments of the working class and intelligentsia have grown up in every union republic, and the most profound changes have taken place in the social makeup, culture and living conditions of the kolkhoz peasantry.

Multinational production, scientific and creative collectives, which are working successfully to perform the formidable tasks of communist construction, represent a notable social and sociopolitical phenomenon of our time.

Abundant experience has been gained in our country in collaboration of all nationalities in solving the major problems of the national economy. Examples of this are construction of the Turksib [Turkestan--Siberian Railroad], the Uralo-Kuzbass, the extremely large hydropower complexes on the mountain rivers of Central Asia and the Transcaucasus, development of virgin land and the extensive tracts of land in Uzbekistan and Turkmenia, the rebuilding of Tashkent, etc. It is through the joint efforts of the union republics that such major national economic tasks have been performed as developing the fuel and energy resources and raw materials of the regions of Siberia, the Far East and the North, the zone of the BAM [Baykal--Amur Main Rail Line], and development of the Nonchernozem Zone. For example, in Tyumen Oblast, where petroleum and gas reserves are being developed, representatives of more than 80 nationalities are at work, and the BAM is being built by workers and specialists of 80 nationalities.

The supreme goal of social production under socialism is the fullest satisfaction of people's growing material and nonmaterial needs. Guided by this humane goal, the Communist Party and Soviet state have in all stages of socialist construction done everything possible for the continuous rise in the standard of living of the Soviet people. This task has been performed under extremely complicated conditions. Socialism had to be defended, age-old backwardness had to be overcome in a historically short period of time, large-scale industry had to be built, agriculture had to be collectivized, and the cultural revolution had to be carried out. Wars and the years of economic recovery took up about 20 years in the history of the first country of socialism. It is natural that this restricted opportunities for performing the task of raising the prosperity of the people, which is a many-sided task in its content and importance.

As advanced socialist society has been built, the resources of the Soviet state have become considerably larger, and this has made it possible to set a course in our long-range economic development premised on the rapid rise in the material and cultural level of the people's standard of living.

The public (obshchenarodnyy) character of the social welfare policy of the CPSU and Soviet state is being revealed more and more fully; that policy is aimed at raising the prosperity, education and culture of the workers, at improving the conditions of their work and rest, at development of housing construction, at improvement of the system of social security and medical care, and at environmental protection. The seventies, when the broadest program in the entire history of the country was carried out for raising the standard of living of the population, are characteristic in this regard.

We will give just a few figures and facts. In that period 32 billion rubles were appropriated to carry out nationwide measures to raise the prosperity of the people, which is nearly twice as much as in the previous 10 years. Real per capita income increased almost 1.5-fold. In the seventies new housing was built exceeding in floor area the entire urban housing stock at the beginning of the sixties. More than 107 million workers obtained better housing; at present about 80 percent of the urban population lives in separate apartment.

Universal compulsory secondary education of young people is a very important social accomplishment: opportunities for obtaining secondary specialized and higher education have been broadened, the number of secondary specialized educational institutions increased from 932 in 1922 to 4,393 in 1981 and the number of higher educational institutions from 248 to 891 over the same period; in all union republics and most autonomous republics there are universities.

The very great progress of public education is typical of all the union republics, especially of the republics of Central Asia and Kazakhstan. It is well known that before the revolution the literacy rate of the population between the ages of 9 and 49 did not exceed 2-8 percent there, and there were no higher educational institutions. Now those republics have 126 higher educational institutions with a total student body of about 705,000. This is considerably more than in all of prerevolutionary Russia. The relative share of university students in the population of those republics is higher than in many capitalist countries. For example, UzSSR and KaSSR have a higher index in this respect than such countries as Italy, Canada, West Germany, France and Japan. The rapid convergence in level of education of men and women, inhabitants of urban and rural areas, and workers of physical and mental labor have great social importance.

The culture of all the fraternal nationalities has flowered, a broad network of cultural and educational institutions has been built up, and television and radio have developed on a large scale. The Soviet Union has taken the leading place in the world with respect to the absolute production of printed material. All of this has made it possible to open up to the people access to the best achievements of culture and to acquaint the broad masses with artistic creativity.

Our country's achievements in the cultural domain arouse enthusiasm throughout the world. As C. Vela, Mexican public figure, has written: "The Soviet people have something to be proud of. The entire world knows of the literature and painting, music and drama, filmmaking and also numerous folk ensembles which are amazing in their picturesqueness and virtuosity. But the principal wonder and main achievement of Soviet reality is the fact that the millions of people in the USSR have gained access to the treasuries of world art and are themselves becoming bearers of progressive socialist culture. That kind of harmonious and comprehensive development of the personality is beyond question possible only in a socialist society.

These figures convincingly show that there is not a single sphere of social life where the motto of our socialist state has not been strikingly manifested: everything in the name of man, everything for the benefit of man.

Solving the complicated and many-sided problems of socialist construction, the development of social production and raising the prosperity of the people required, as V. I. Lenin pointed out, transforming the entire economic mechanism of the state into a single large-scale machine, into an economic organism that operated so that millions of people were guided by a single plan. V. I. Lenin saw that the way to do this was to set up the strictest system of nationwide recordkeeping and monitoring of production and distribution of products. He pointed out: "Recordkeeping and monitoring--those are the main things required for 'adjustment,' for the proper functioning of the first phase of communist society."*

Statistics, which in our socialist society has taken on fundamentally new features and has become a centralized service of the state, one of the principal instruments for safe management and planned supervision of the national economy, has a most important role in this. Statistics is inseparably bound up with the specific socioeconomic tasks in development of Soviet society in all its stages.

The first USSR Constitution stated that the organization of unionwide statistics would be among the nationwide affairs vested in the Union of Soviet Socialist Republics, as represented by the supreme organs of state power and administration.

This emphasized the important role of centralized statistics in our socialist state. With the active participation of the statistical administrations created in the union republics even in the first years of formation of the USSR, major statistical projects were carried out. They included: the All-Union Population Census in 1926, the dynamic survey of peasant farms in 1927, the complete census of sovkhozes and kolkhozes in 1928, the census of small-scale industry in 1929. Soviet statisticians laid a scientific foundation for the balance of the national economy, which was first compiled for the 1923/24 period. Current statistics on economic and cultural construction were organized. The Soviet state statistical service has been developing without interruption and has been improving on the basis of Leninist principles of organization and methodology, relying on the constant attention of the party and government to questions of accounting and statistics. It has now taken up a leading place in organizing the collection and processing of data in the country.

More attention is being paid to the working up of data both for the national economy as a whole and its sectors and also in a regional breakdown. This affords the possibility of summarizing and analyzing the results of economic and social development and the progress in carrying out state plans, of seeking out reserves that exist in the economy of each union republic, which makes it possible for the statistical service to take an active part in carrying out plans for the further augmentation of the material and nonmaterial potential of each of them.

A typical feature of the state statistical service is the constant strengthening of statistical agencies at the republic level and concretization of their work plans on the basis of the peculiarities of the economic and social development of each union republic.

The personnel of the state statistical service have always been loyal helpers of the party in carrying out scientific management of the economy, in guaranteeing planned and proportional development of the economy, in monitoring progress of plan fulfillment, and in discovering unused potential.

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* Lenin, V. I., "Polnoye sobraniye sochineniy," Vol 33, p 101.

Along with the entire Soviet people they have participated actively in carrying out the decisions of the 26th CPSU Congress and the May (1982) Plenum of the CPSU Central Committee, and they are presenting labor achievements in honor of the 60th Anniversary of Formation of the USSR.

The decisions of the November (1982) Plenum of the CPSU Central Committee and the propositions and conclusions set forth in the speech of Comrade Yu. V. Andropov, general secretary of the CPSU Central Committee, place responsible tasks before state statistical agencies concerning further improvement of the statistical service. They are aimed at performing a most important task advanced by the 26th CPSU Congress--strengthening the intensification of social production and increasing the efficiency of the economy. It was especially emphasized at the plenum that the main thing now is to speed up the effort to improve the entire sphere of guidance of the economy--management, planning and the economic mechanism.

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INDUSTRIAL DEVELOPMENT AND PERFORMANCE

USE OF ECONOMIC LEVERS FOR IMPROVING THE WORK OF INDUSTRY

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 2, Feb 83 pp 63-71

[Article: "Use of Economic Levers for Improving the Work of Industry (From the Rostrum of an All-Union Scientific and Technical Conference")]

[Text] The present stage of socialist construction has made increasing the effectiveness of social production and its intensification a top priority problem. The resolution of this problem requires the intensification of creative effort and the ability of economic managers and labor collectives to concentrate their activity in the key directions of economic and social progress. This demand stems from the resolutions of the November (1982) Plenum of the CPSU Central Committee which called for the maximum utilization of the existing potential in order to improve economic activity, to accelerate scientific and technical progress, to increase labor productivity in all areas of the national economy, and to increase the volume and improve the quality of production. The improvement of the economic mechanism was the subject of an all-union scientific and technical conference held in December 1982 at Moscow State University im. M. V. Lomonosov. Conference participants included scholars and specialists from many branches of the national economy, leaders of economic organs and scholars from CEMA member nations (People's Republic of Bulgaria, Hungarian People's Republic, German Democratic Republic, Polish People's Republic, Cuba, and the Czechoslovakian SSR).

Professor G. A. Yegiazaryan, doctor of economic sciences, (Moscow State University) delivered the main report at the plenum. Proceeding from the notion of improving the economic mechanism, the basis of which was set forth in resolutions of the 26th Party Congress and the 12 July 1979 decree of the CPSU Central Committee, the speaker discussed balanced economic development and the implementation of a complex of economic, organizational and administrative measures promoting plan discipline and responsibility at all levels of management. He focused particular attention on the expansion of the economic boundaries of cost accounting relations and on the formation of their structure. The present stage in the socialization of production alters the content and character of the activity of the basic production entity in industry: the association. The tasks posed in this regard are: to transform production associations and combines into the basic cost accounting entity in social production; to convert the middle branch link--industrial associations--to cost accounting; and to extend cost accounting principles to branch ministries.

The formation of a cost accounting dependence between outputs and inputs, the development of the cost accounting link in the process of capital circulation, the more complete reimbursement of costs by incomes and the consistent implementation of self-recoupment processes are linked to improvements in the normative-share method of profit distribution.

The improvement of wholesale prices in the 11th Five-Year Plan creates optimal conditions for cost accounting activity in branches and reduces the number of enterprises that operate at a planned loss or with low profitability. Industry's profitability level (12-15 percent), which was established when the new wholesale prices were formulated, is also instrumental in promoting this situation. The normative-share method envisages the use of a norm that determines the share of profit that is left to the disposal of the branch from general profit. However the use of the given norm may weaken the stimulating role of payments for capital and other resources. Payments for capital reach the budget as part of the general flow of profits and do not influence the evaluation of branch performance. In order to preserve the stimulating function of payments for capital, it is stipulated that above-norm inventories not purchased on credit and uninstalled equipment must be paid for out of the part of the profit that is left at the disposal of the production entity. If the plan is fulfilled with capital lower than the authorized value, the saving in capital payments is left at the disposal of the production entity and payments to the budget are reduced by this sum.

In his evaluation of the existing normative-share method of profit distribution, the speaker substantiated a variant that called for payments for capital to be paid to the budget first and then for dividing calculated profit between the budget and the ministry on the basis of norms.

The report devoted a considerable place to measures aimed at strengthening the role of the production development fund. The most important function of the economic mechanism is to secure a dependence between the performance of production entities and the size of the wage fund. In the opinion of G. A. Yegiazaryan, the transition to the normative planning of wages, the use of savings of the latter to raise wage rates, salaries and bonuses, the improvement of the equipment system, and the use of incentive funds (especially the material incentive fund) are instrumental in increasing the stimulating role of the entire wage fund, wages and bonuses.

The saving of material expenditures becomes an important factor in capital formation. Starting in 1983, direct payments will be made to material incentive funds from the total saving resulting from the reduction of material expenditures compared with the ratified limit. The general trend toward improving capital formation indicators is the transition to a system of indicators characterizing effectiveness, quality and the final result. Thus economic levers (indicators and norms) become important regulators of the distribution of the wage fund. Basic attention in this regard is devoted to the realization of the stimulating role of normative net output. Measures to improve the economic mechanism presuppose that planning exerts a corresponding influence on production.

In his report, D. V. Ukrainskiy, a department chief in USSR Gosplan, discussed the question of improving planning under the 11th Five-Year Plan. He noted that the current five-year plan's deadlines for drafting plans and for ratifying draft plans were not met at the ministry level. Therefore a considerable percentage of the enterprises could not actively participate in the drafting process.

An important feature of the five-year and one-year state plans is that they envisage the more integrated implementation of economic and social programs and a higher concentration of resources allocated for the fulfillment of the most important national programs.

Work on the compilation of programs has still not fully coordinated problems of science and technology with problems of economic and social development. The program method will become more important in long-range planning and accordingly more attention must be devoted to the methods used to build programs into planning technology. The development of programs on the basis of available resources can become one of the directions in the resolution of this problem.

The normative base of calculations and especially of norms for material resources underwent further development in the process of drafting the 11th Five-Year Plan. Nonetheless this development is primarily associated with the mechanical expansion of the product mix that is the basis for establishing targets on lowering norms governing the expenditure of material resources. This approach does not always hit the mark: for example, while the norms governing the expenditure of rolled ferrous metals decline every year, the metal utilization factor does not rise. The need is not for more detailed calculations but rather for their consolidation based on actual dynamics and on scientific and technical progress. Norms of an economic nature have not yet found their proper application. The transition to the normative planning method requires the strict monitoring of its implementation and the common interest of enterprises, ministries and higher level organs in making broad use of norms in the period preceding the plan. These relations have not yet formed in the course of applying wage and profit norms and indicators are adjusted on the basis of actual fulfillment.

Balance methods linking production and consumption play an important part in improving planning. These methods will be subsequently reinforced as a result of reciprocal coordination, higher departmental responsibility in indicators at the national economic level, and the higher degree of concreteness of plan, i. e., mandatory, targets rather than as a result of a larger number of balances.

The improvement of balance methods at the level of the national economy must be reinforced at the level of the basic entity--the enterprise--by the evaluation of economic activity based on products sold with due regard to the fulfillment of delivery contracts. The given indicator is used in forming incentive funds, in summing up the results of socialist competition and in awarding bonuses. But in addition to this, it is also necessary to evaluate the performance of the labor collective in general.

An important direction in the improvement of planning is the development of the system of physical measurers of output. They must reflect consumer properties more completely and motivate producers to use minimum material resources. Thus a new unit of weight measurement--the "conditional ton"--will be instituted in metallurgy thereby making it possible to reflect the contribution of collectives to output and the labor-intensiveness of production. Similar work is also scheduled for other branches.

Planned economic development is integrally linked to sales and material-technical supply. At the present time, there is no connection between supplier and customer. Ministries do not play a sufficient role in studying need and in distributing products. Products must for the most part be sold on the basis of active, direct, long-term economic ties and not on the basis of the coupling of customer and supplier over an extended period of time. At the same time, it is essential that territorial organs of USSR Gossnab guarantee various localities that they will be supplied with types of products that are supplied in minute quantities.

The successful realization of many directions of improvement of the planning system is integrally linked to raising the responsibility and economic independence of the basic element of management of industrial production. This is in turn associated with cost accounting management techniques that are based on substantiated economic norms. As S. A. Sitaryan, doctor of economic sciences; deputy minister, Finance USSR, noted, their most important function is to optimize the interaction of centralized mandatory planning and the economic stimulation of socialist production. At the same time, economic norms should not be regarded as an alternative to centralized mandatory planning indicators. S. A. Sitaryan identified the following basic functional groups of economic norms: regulatory expenditures in the production process; distributive service-type relations; and stimulating relations. The introduction of economic norms in branches of industry is in particular hindered by the instability and imbalance of plans; by the lack of comprehensiveness and consistency in the improvement of the economic mechanism; by the insufficiently effective practice of applying and revising prices; and by the still weak role of enterprises in drafting annual plans.

The growth rates of labor productivity were seen to decline in industry in the Tenth 5-Year Plan and the first years of the 11th Five-Year Plan. The following are decisive factors in overcoming this negative trend: development and production of effective new technology that raises labor productivity 1.5-2 fold rather than 10-15 percent; the higher share of capital investments and the higher share of highly productive machine tools and machinery earmarked for reconstruction and technical retooling projects, the higher shift coefficient in machine building, etc. This point was discussed by L. A. Kostin, doctor of economic sciences; deputy chairman of the USSR State Committee for Labor and Social Problems.

He noted shortcomings restraining the effective use of the normative method of wage planning and in particular the continuing adjustment of plan targets. Serious difficulties are observed in the actual introduction of the brigade form of organization and stimulation of labor which is presently going through the organized stage of formation.

The establishment of limits on the size of the work force of industrial ministries, associations and enterprises in five-year and one-year plans for the economic and social development of the national economy is of major importance in this regard. Some results have already been achieved in this area. Nonetheless there are still gaps in the determination of limits on the size of the work force. Sanctions for exceeding this limit are virtually not invoked. It would be expedient to institute a procedure whereby USSR Gosbank could grant industrial associations and enterprises payroll funds for the production of goods (excluding consumer goods) produced as a result of maintaining workers in excess of the limit only with the authorization of a ministry (department). These funds should be counted as an overexpenditure of the wage fund and should be subsequently repaid according to the established procedure.

The economic mechanism by which enterprises draft and fulfill intensive plans was examined in the report by P. G. Bunich, corresponding member of the USSR Academy of Sciences. The presently employed plan fulfillment indicators do not reflect the intensiveness of the plan. They favor those who exceed planned expenditures of raw materials and supplies and who understate their production capacities. Even if losses and low profitability are built into the plan, fulfillment of the plan is rewarded in full measure. The most favored position today is occupied by collectives that have invested more capital. Therefore it is more correct to take into account not just the increase in the volume of expenditures but the degree to which the newly built shops have made it possible to increase the production of quality products and how much less it costs to produce them compared with the previous level.

P. G. Bunich proposed modifying the schematic diagram of distribution of created value. He analyzed the practice of applying markups to wholesale prices for effectiveness and quality and noted that the markup transfers to the builder part of the profit obtained by the customer as a result of the ahead-of-schedule activation of a facility. Markups are to be planned within the framework of the existing economic mechanism and are to be entered on a separate line since they are distributed differently than other income.

The need to combine centralized and territorial planning within the framework of five-year and one-year plans for economic and social development places the regional aspect of the complex of problems of improving the economic mechanism on the agenda. In the opinion of Academician A. G. Aganbegyan, an important part here must be played by special regional integrated programs on the basis of which the development of economic regions assumes an integrated character, the siting of the productive forces and the construction of production, cultural and service facilities (irrespective of their departmental affiliation) become scientifically substantiated, and the flows of freight and shipments of basic cargo are made more efficient.

The important role of the institution of USSR Gosplan agents for economic regions of the USSR should be emphasized. However the activity of agents should be reinforced by proposals and research work by appropriate regional project planning and scientific research organizations. The need for such a measure is also dictated by the fact that at the present time the gosplans of autonomous republics and planning commissions of executive committees of Soviets of People's Deputies of krays and oblasts essentially lack the necessary research and design base.

A. G. Aganbegyan believes that in addition to five-year plans of regional economic and social development, it is also necessary to elaborate long-range plans for 10-20 years in advance. Only a long-range approach to the economic management of regional development will make it possible to establish the dependence between the contribution of an economic region to increasing the effectiveness of the nation's economy and the formation of the appropriate local budgets.

G. Kh. Popov, doctor of economic sciences, (Moscow State University) devoted his remarks to the development of branch and territorial principles in industrial management. Within the framework of this theme, he noted the need to increase the responsibility of manufacturing ministries for the final product. This responsibility is low at the present time since the final product itself is the result of the activity of enterprises belonging to several ministries.

Academician T. S. Khachaturov discussed the problem of economic incentives in the system of rational natural resource utilization. The action of economic levers must be directed first and foremost toward promoting an economical, thrifty attitude toward natural resources.

The economic stimulation of rational natural resource utilization. T. S. Khachaturov proposed several approaches to the construction of formulas for making such an evaluation depending on the category (type) of resource. Bonuses for the full utilization of the capacities of purification plants, rewards for reducing the maximum permissible concentration of noxious substances and the total utilization of waste are among the top priority material measures for stimulating the rational utilization of natural resources.

The system of planning indicators and the conditions underlying its application were examined in a report presented by G. Ia. Kiperman, doctor of economic sciences (NIIPiN under USSR Gosplan). Change in the conditions underlying the development of social production necessitates improvement in the entire economic mechanism, including the system of indicators. However, it does not follow from this that it must change continuously.

While the demand of noncontradictoriness is usually made on the system of indicators it is not possible to observe this demand completely since the system of indicators reflects the contradictions of reality. Even though it is impossible to avoid the contradictions that stem from flaws in the indicators, we also should avoid introducing contradictions stemming from the flaws in the indicators themselves, their unsuccessful combination or the incorrect determination of the area of application of each indicator.

For example, enterprises are assigned a target of normative net output and a target of sales volume. The contradictoriness of such a combination is obvious. It is due to differences in the content and value structure of these indicators. Neither one nor the other can be used to determine the volume of production. Normative net output is used to measure the physical volume and dynamics of production while products sold are used solely for evaluating the fulfillment of delivery plans on the basis of contracts and orders.

The system includes indicators characterizing production, distribution, exchange and consumption; at the same time, the question of classifying individual indicators as indicators to be ratified, as evaluative indicators or as accounting indicators is resolved in different ways.

In the realm of improving value indicators, it is important to make the transition to using the normative net output indicator and to raise the role of the indicator of plan fulfillment on the basis of sales with due regard to the observance of obligations based on contracts and orders.

Even though more than 3 years have elapsed since the publication of Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers (12 July 1979, not all measures--in particular, the measure to improve physical measurers of output--have been adopted. In some branches, the effort to improve them is perfunctory. The incorporation of planning and the delivery of products in sets and complexes are proceeding at a slow pace. G. Ya. Kiperman's report differentiated the conditions of application of the system of plan indicators. The so-called shortcomings in a number of indicators are in most cases due not to their content or the methods used to determine them but rather to their being used contrary to their objective content. For example, irrespective of the role of individual enterprises in total industrial output, it is best to use the commodity output indicator to determine this output. However the commodity output indicator is totally unsuitable for determining the real contribution of each enterprise and its labor collective to the development of production and to the satisfaction of social requirements.

O. I. Novikov, prorector of Moscow State University, discussed the problem of improving the economic incentive system. Evaluating work that has been performed in construction, he noted that the completed construction work indicator is based on "gross output" which reduces the genuine interest of builders in reducing the expenditure of material resources. In recent years, there has been a notable trend toward reducing incomplete construction in projects financed by state capital investments. The speaker proposed a number of measures to stimulate the increased effectiveness of capital investments.

In order to give the collective and individual worker greater motivation to put construction projects into operation sooner and to observe planned construction deadlines, the bonus procedure must be altered: a substantially larger advance bonus must be paid (within the limits of the overall sum of the planned bonus) quarterly when the demands regarding the duration of construction are met; in other words, this bonus should be included among current bonuses.

Professor A. D. Sheremet, doctor of economic sciences (Moscow State University) presented a report that was devoted to raising the role of economic analysis in improving the economic mechanism. He emphasized that more attention will have to be devoted to the development of economic analysis in the next few years. It must be made the everyday, universal tool for converting the national economy to the predominantly intensive type of development. In the 1980's, there are three basic tasks in the development of economic analysis. The first task is to strengthen the relationship between analysis and planned management decisions. The second task is to identify reserves. Up until recently, emphasis has been placed on current reserves that are realized in the course of the year. The identification of prospective reserves is primarily associated with raising the scientific-technical and organizational level of production. The third task is the objective evaluation of the performance of economic entities and their collectives from the standpoint of the development of cost accounting, incentives and socialist competition taking into account their specific contribution to the results.

A. D. Sheremet gave a detailed description of the role of the scientific and technical community in improving analytical work at enterprises. These same problems were examined in the report presented by N. N. Gritsenko, first deputy chairman of the All-Union Council of Scientific-Technical Societies.

P. M. Katsura, deputy general director of the "AvtoVAZ" Production Association, discussed the integrated system of organization of production, labor, management and material incentive in large-scale production. A number of basic principles of the economic mechanism that is being put into operation everywhere was widely tests and in particular in the "AvtoVAZ" association. This enabled the VAZ collective to obtain unique results: the rated capacities of each of the sequentially activated phases of the plant were practically reached within a year; simultaneously with production, rated indicators were reached for labor-intensiveness, enterprise cost of production and labor productivity. They were subsequently surpassed and measures directed toward raising the technical level of production made the vehicles competitive on the world market. The national economy ultimately obtained hundreds of millions [of rubles] in additional profits and the vast capital invested in the construction of the VAZ complex were recouped in less than one five-year plan period.

P. M. Katsura discussed possible directions of further improvement of management under conditions of large-scale production and in particular the need to improve organizational structures of enterprise management.

Statistical data and one-time studies of enterprises attest to the uneven concentration of a vast machine tool inventory in auxiliary production and its underutilization and to the employment of personnel who are also less productive than those in basic production. A similar situation is also preserved even under conditions when the creation of associations based on the concentration and specialization of production based on master plans of management of industrial branches in the next few years.

Structural shortcomings of large enterprises and associations become especially apparent in the process of tooling up for the production of new types of products. The result is unconscionable delays in the activation of capacities, in reaching rated capacities and in attaining rated technical and economic indicators.

A. V. Glichev, director of the All-Union Scientific Research Institute of Standardization; doctor of economic sciences, spoke of raising the role of standardization in improving the economic mechanism (the introduction of a state system of standardization, of a unified system of tooling up for production) and the widespread practice of certifying product quality.

V. M. Ivanchenko, doctor of economic sciences (Institute of Economics of the USSR Academy of Sciences) concentrated primarily on the improvement of a system of long-term, five-year and one-year plans, program-goal planning, balances, indicators, and norms. He justified the need to develop methods, technologies and organization of planning and legislative norms and also discussed the question of improving the financial and credit mechanism.

L. A. Busiatskaia (USSR Ministry of Heavy Machine Building) discussed the integrated implementation of measures to improve economic mechanism in an industrial ministry and urged planning organs to draft quality five-year plans and to use them as the basis for quality one-year plans. It is essential that the plans be balanced with regard to all indicators and that the level of production be based on the availability of capacities, material and labor resources. There should be no 'stretching of the point' in the plan since it inevitably leads to its imbalance in the course of its fulfillment.

In the interest of accelerating the utilization of scientific and technical advances in industry and of implementing special integrated scientific and technical programs, it is necessary to establish a monitoring system that will ensure the effective coordination of the activity of ministries and departments participating in the implementation of integrated scientific and technical programs. In order to increase the effectiveness of using capital investments, at the same time that the volume of capital investments is specified, limits should be established on contractor-performed work thereby guaranteeing the activation of facilities on schedule and plans for capital investments should be formulated in advance of production plans.

In this regard we should emphasize the need to elaborate directive documents that raise the reciprocal responsibility of clients, construction-installation organizations, planning-surveying organizations, and suppliers of materials and equipment for the scheduled activiation of production capacities and facilities, which is especially important in view of the increased incidence of the financing of capital construction by bank credit. It is necessary to accelerate the development of guaranteed integrated supply of associations and enterprises from the bases of territorial administrations.

S. I. Shkurko, doctor of economic sciences, reported on the problem of increasing the stimulating role of wages. He suggested the need to link one-time rewards, additional pay and bonuses more closely to the revision (establishment) of norms governing the expenditure of resources and that the actual producers--workers--take an active part in this work. In order that there be a direct tie between change in individual wages depending on the dynamics of collective wages, it is essential to secure interaction between collective and individual forms of material incentive. S. I. Shkurko believes that the wage fund should be distributed in various directions and for different categories of personnel based on the joint decisions of the administration and the local [trade union] committee. This is the most important question in the structure of the collective contract.

Given the growing volume of five-year plans, the average wage should also be planned for various occupations and skill levels for individual years of the five-year plan. The growth of the wage fund and the work incentive fund, changes in the socioeconomic evaluation of the labor of various categories of personnel and other factors must be taken into account. Changes in the structure of wages and the terms of remuneration of labor must be planned at the same time.

The principal points of the reports and the draft recommendations of the conference were discussed in sittings of eight sections.

As a result of the broad exchange of opinions, participants in the conference adopted detailed recommendations that will be forwarded to the appropriate executive organs and other interested departments.

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DEVELOPMENT PROBLEMS OF KHABAROVSK KRAY

Moscow EKONOMICHESKAYA GAZETA in Russian No 8, Feb 83 p 5

[Article by A. K. Chernyy, first secretary, Khabarovsk Kraykom of the CPSU: "Integrated Development of the Kray Economy"]

[Text] To the Far East and its component part--Khabarovsk Kray--it is extremely important to resolve an urgent problem that was discussed by Comrade Yu. V. Andropov in his report on the 60th anniversary of the USSR: "...To improve the location of the productive forces, regional specialization and cooperation, and plans for economic relations and shipments further."

Khabarovsk Kray is a most important industrial region in the Soviet Far East. It accounts for approximately one-third of the industrial output of the Far Eastern economic region. In the Soviet Union's division of labor, the kray occupies an important place in the production of individual types of machine building products, tin and nonferrous metals, in logging, in lumber production, and in fishing.

At a High Rate

The decisions of the party and the government determine the high growth rates of the kray's economic potential. Suffice it to say that in the 15 years that have elapsed since the adoption of the decree of the CPSU Central Committee and the USSR Council of Ministers on the further acceleration of the development of the Far Eastern economic region's productive forces, the kray's industrial output has almost trebled and its agricultural output has doubled. Characteristically, this growth has been chiefly due to higher labor productivity, a matter to which the kray party organization has devoted much attention.

During these three five-year plans, the investment in the development of the kray economy has been the same as was invested in the last 40 years. The construction of the Baikal-Amur Mainline became a powerful impetus to economic progress.

At the same time, the task of further increasing the effectiveness of the national economy urgently requires increased emphasis on the integrated approach to the development of all branches of the economy and the production and social infrastructure.

At the initiative of the kraykom and krayispolkom, all party organizations and labor collectives recently organized the in depth study of these questions, the results of which were summarized at a kray conference. With the participation of Far Eastern scholars, republic specialists and all-union planning and economic organs, long-range problems and basic directions of comprehensive development and the location of the kray's productive forces were carefully analyzed. This unique preplanning work incorporated the rich experience of all labor collectives.

The kray's existing place in the all-union division of labor will for the most part be preserved in the foreseeable future. The scale of new construction will continue to increase. But at the same time, there will unquestionably be expansion of the front of works directed toward raising the effectiveness of the utilization of resources and the production potential. The significant increase in production must be secured through the deeper processing of the kray's mineral, lumber and other resources.

A Thrifty Attitude Toward Natural Resources

In our opinion, the problem of the further development of the mining branch and its augmentation by corresponding metallurgical and chemical enterprises and by other branches that process raw materials merits the closest attention of USSR Gosplan and all-union ministries. The kray must intensify the production of the end product of these branches from the standpoint of the effectiveness of the entire national economy. Only in this way is it possible to extract all valuable elements from our ores or in other words to make the transition to wastefree technology. In this regard, for example, there is an urgent need to accelerate the development of the Solnechnyy Ore Concentration Combine, especially by establishing a metallurgical processing capacity the absence of which means that a considerable quantity of nonferrous and rare metals that accompany tin must be scrapped.

While the kray presently has considerable opportunity to develop its mining industry, this opportunity could be still greater if geological work were speeded up. At the present time, only 46 percent of the kray's territory has been subjected to regional geophysical research while only 18 percent of the kray's territory has been subjected to medium scale geological exploration work.

In the last three five-year plans, timber shipments have more than doubled; timber resources in the BAM have been broadly developed; the Amursk pulp-cardboard and woodworking combine and Kopinskiy Wood Processing Combine have been put into operation; the Tungusskiy and Khorskiy wood processing combines have been expanded; sizable capacities for producing industrial chips have been put into operation; the volume of processing of low-grade deciduous trees and logging and wood processing scrap has been increased.

However it would appear that only the first steps have been taken in this direction. Even in areas that are presently being logged, over 2.5 million m^3 of timber are not harvested each year. The principal reason for this phenomenon is the shortage of processing capacities. We see the solution to lie in the kray's purposeful integrated development of the pulp-paper and wood processing industry, which will permit the more complete utilization of wooden raw materials, and in the creation and introduction of a complex of machines making it possible to process logging scrap at the cutting site. The need for such decisions is occasioned by the fact that the development of furniture production today is impeded owing to the shortage of splint slab, which our wooded kray must have shipped in from Siberia and must even ship in corrugated packing materials from Kazakhstan and Central Asia.

It is also very important to improve the distribution of the kray's timber industry. With the aid of scientists and specialists, the party Kraykom has analyzed the activity of timber procurement organizations with an eye to attaining the highest end result. The results in this area have been substantial.

Thus most timber is harvested in the southern and central regions while the richest timber resources of forests in the northern territories are practically unutilized. Naturally, the organization of logging in the northern regions of the kray entails additional capital investments. Accordingly, long-range plans should consider the question of laying a mere 250-300 kilometers of railroad track to northern regions of the kray adjoining the BAM. In building this branch line, we should utilize experienced collectives of BAM builders who will become available as the construction of the road nears completion.

The kray's fish industry can also make a more significant contribution to the implementation of the Food Program. Here, too, our basic direction is the development of the processing of fish and marine products. We must also resolve the question of building a large ocean base for ocean fishing in Sovetskaya Gavan', of building a large marine seaport there and of providing a comprehensive solution to the problem of reproducing fish in the Amur River basin.

The development of leading branches of all-union specialization of the kray poses a large number of questions essentially relating to the improvement of the location of the productive forces, the formation of an effective territorial production complex and industrial centers, and the lowering of shipping costs.

Specialization of Machine Building

I would like to discuss machine building in particular. Even now machine building and metalworking create 37 percent of the kray's commercial industrial output. Collectives of the "Energomash" plant, the Kirov plant, the "Amurlitmash" plant, the power transformer plant, the Universal Cable Plant imeni 50-letiya SSSR, an electrical equipment plant, and the "Dal'dizel'" plant in 1982 produced 40-80 percent of their products with the state Quality Emblem.

However this branch typically has raw materials, supplies and components shipped in from central regions of the country at the same time that it ships substantial quantities of finished products in the opposite direction.

This relates primarily to such enterprises as "Amurlitmash," the hoist-transport equipment plant, the power machine building plant, and the machine tool building plant, more than 90 percent of whose output is shipped outside the Far Eastern Region.

At the same time, Far Eastern agriculture has a great need to develop and produce special machinery, especially for the cultivation of soy beans. In 1978, a government decision called for the production of a number of machines and implements for the total mechanization of the cultivation and harvesting of soy beans; however the Ministry of Agricultural Machine Building did not develop them.

Even such a plant as "Dal'sel'mash", created especially for the output of machine systems for cultivating and harvesting all the basic types of agricultural products in the Far Eastern regions, is producing no machines except grain and silage combines and more than 65 percent of all production is being exported to other regions of the country.

Improving the Infrastructure

In the interest of increasing the effectiveness of the kray's economy, the kray party organization, ministries and departments must jointly resolve a number of difficult problems regarding the improvement of the production infrastructure. The reference is to power and transport. In order to improve the energy balance of the kray and the region, plans should make provision for stepping up construction work on the Bureyskaya Hydroelectric Power Stations and on the Khabarovsk and Komsomol'sk-na-Amure TETs-3; accelerate the installation of 220- and 500-kilovolt electric power lines and on substations for them. And above all there is need for the Khabarovsk-Komsomol'sk-na-Amure LEP-500 without which it will be impossible to supply electric power for electric furnaces at the building site of the Far Eastern Metallurgical Plant.

Now and in the near future, the rapid growth of the productive forces requires the search for new sources of fuel supply. Yakutsk gas from the Vilyuyskoye deposit and Sakhalin gas can be most effective in this regard.

The construction of a gas pipeline from the Vilyuyskoye deposit to the southern regions of the Far East is in large measure facilitated by the roads adjacent to the pipeline. The second favorable factor is the possibility of using now available capacities of construction organs that worked on the BAM to lay the pipeline.

By using gas, it was possible to expand the production of mineral fertilizers for the entire Far Eastern region and thereby to free rail transport from the need to ship millions of tons of fertilizers many thousand kilometers.

In the last 15 years, all types of transport have undergone further development in the kray. During this time, freight turnover increased 2.3 fold while common carriers (the Amur steamship fleet and the truck fleet) grew 1.4 fold. However transport enterprises do not fully satisfy the economy's rapidly growing requirement.

The party kraykom considers an urgent task of transport to be the development and implementation of concrete measures for coordinating the work of various types of transport, for making better use of existing potential, and for rebuilding transport routes. Priority should be given to the stage-by-stage construction of sidings and secondary tracks in the Volochayevka-Komsomol'sk-na-Amure sector, to enlarging processing capacities in Khabarovsk, Komsomol'sk and Amur transport centers, to the development of industrial rail transport, etc.

Manpower supply to the national economy is a most important condition to the accelerated development of the productive forces. We must resolve this question in the face of insufficient natural population growth and intensive migration.

A Five-Year Plan of Shock Work

Under these conditions, the rate of development of the productive forces will depend first and foremost on the resolution of the problem of increasing labor productivity, of reducing manpower turnover, and of making prompt and effective use of advances in science and technology and of labor-saving technologies.

The experience of leading enterprises shows that the resolution of these problems is linked to raising the technical and overall level of production, the active introduction of progressive forms of organization and stimulation of labor, and to the broad development of effective socialist competition. The improvement of working conditions, the skillful use of moral and material rewards, the strengthening of labor discipline, and the creation of a healthy moral and psychological atmosphere are of no little importance.

The efforts of labor collectives and of the entire kray party organization are presently directed toward the resolution of these problems.

A good vision of the future permits the more purposeful resolution of concrete issues in the struggle to meet the targets of the 11th Five-Year Plan.

The kray's working people have pledged to complete the 1983 plan by 29 December and to sell 32 million rubles' worth of products in excess of the plan. The totals for January indicate that this pledge is being met. Sales volume in January increased by 12.8 percent compared with January in the preceding year, labor productivity increased by 10.5 percent.

The kray party committee strives to develop the successes of the first month and to create conditions that will enable every enterprise and every working person to meet the targets of the third year of the five-year plan in the light of the resolutions of the November (1982) Plenum of the CPSU Central Committee.

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REGIONAL DEVELOPMENT

SIBERIAN INDUSTRIAL DEVELOPMENT LEAD TIMES NEED REDUCTION

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 10, Oct 82 pp 110-112

[Article by V. Tumin, candidate of economic sciences]

[Text] Siberia's natural resources--fuel, energy, timber, water, etc.)--make it a logical site for the production of energy-, materials- and water-intensive products. The chemical and petrochemical industries are among the branches that could be effectively sited in Siberia. However the level of the branch's development is still insufficient from the standpoint of the region's potential. Siberia's share in the all-union production of chemical products is approximately 10 percent and it has not increased in the last few years.

Targets of the 11th Five-Year Plan stipulate that Siberia's chemical and petrochemical industry must develop at a faster rate than the branch in general. This tendency should also be continued after 1985. Research indicates that Siberia should increase its production of the most energy- and water-intensive products 2-4 fold and that the all-union base for polymer chemistry should be established in Siberia. For example, according to the USSR Gosplan's Council for the Study of Productive Forces[*], it is possible to pose the task of creating capacities capable of producing 3-4 million tons of various kinds of polymer materials (synthetic rubber, plastics, resins, chemical fibers, raw materials used in their production, and products of organic and chlorocarbon synthesis) a year in Siberia. Throughout the entire production chain, 3-4 tons of hydrocarbons, 5-10 tons of standard fuel and 500-700 m^3 of fresh water are frequently required to produce a ton of these products. Calculations show that it costs 50-100 rubles less to produce a ton of these products in Siberia than in the European USSR.

Since the chemical industry has not been sufficiently developed in Siberia, it is essential to carry out a broad program of work to create new enterprises and to refurbish and retool existing enterprises and production facilities. This will require large investments of capital since it often costs tens of millions of rubles to build a new chemical production facility. And in order to ensure a high degree of effectiveness of capital investment in the face of adverse factors (Siberia's severe climate, the low degree of development of its territory, the high cost of construction and installation work, the relatively greater scarcity of manpower, remoteness from industrial centers, etc.), a correct action strategy should be developed in the course of planning, designing, building, and operating new chemical facilities.

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[*] See: I. Kalashnikova, "The Development of Chemistry and Petrochemistry in Siberia," PLANOVOYE KHOZYAYSTVO, No 3, 1980.

The activation of newly built Siberian facilities becomes an urgent matter. The Kuzbass Polytechnical Institute has researched this problem for a number of years and has found that the time and effectiveness of activation of new production facilities in the chemical and petrochemical industry of Siberia did not differ from analagous indicators in the European SSR.

Analytical data show that the activation of facilities in the given branch was delayed owing to errors and miscalculations in the pre-startup period. While the quality of work in this period of development of production is determined by approximately the same conditions in all regions of the nation, in Siberia it may suffer as a result of the lack of development of the design and construction bases and of chemical machine building.

Approximately 70 percent of the Siberian construction projects surveyed were designed by organizations located in the central part of the country. For a number of reasons, this made it difficult for the designers to keep in touch with the construction effort, to coordinate design changes and supplements, and to take the region's more severe climate and other features into account in the designs. The chemical machine building capacities existing in Siberia and the Far East are extremely small for the given territory. What is more, most of their output is earmarked for regions other than Siberia.

The remoteness of the machine building enterprises and the mass character of equipment deliveries make it difficult for the manufacturer to monitor the quality of assembly and installation of the equipment. The capacity of Siberia's construction basis is frequently inadequate to the requirement for construction and installation work. Capital saturation of Siberian construction organizations is often between one-third and one-half of the national average. Siberia also uses fewer prefabricated components. Accordingly in order to perform the same construction program as other regions, Siberia must make additional inputs of live labor and must take more time. All this has a negative impact on construction and on the quality of construction and installation work.

Practice shows that the smallest number of flaws in the pre-startup period are found at production facilities that are built in close contact with local scientific research and design organizations. Therefore the development of the network of the latter is the guarantee of higher quality construction and hence of the earlier activation of these facilities. This does not mean that Siberia must necessarily create its own scientific research and design organizations. They should primarily be affiliates of head organizations that should exist in all of the most important subbranches of Siberia's chemical and petrochemical industry.

In the next few years, it will be necessary to organize large affiliates of design organizations in Siberia's synthetic rubber and polymerization plastics industry. This is dictated by the intensive increase in the volume of construction work on the Tobol Petrochemical Combine, the Zima electrochemical complex, Tomsk Chemical Plant, and the Omsk Plastics Plant and by plans for the creation of new production facilities at existing enterprises. A large affiliate of a design organization should also be formed in the chemical fibers industry. Local design organizations must be endowed with all the authority necessary to resolve the questions that arise in the process of building production facilities anywhere in Siberia (irrespective of the departmental affiliation of enterprises at which the new capacities are being installed.

The strengthening of construction bases and the enhancement of the capacities of chemical machine building should improve the quality of work in the pre-startup period in the creation of chemical production facilities in Siberia. The accelerated development of Siberia's construction industry during the 11th Five-Year Plan in keeping with the decisions of the 26th CPSU Congress and the construction of a chemical and oil refining equipment plant are very important in this regard. It is important that these facilities be (1) oriented toward satisfying the equipment requirements of Siberian chemical enterprises proper; and (2) specialized in the manufacture of equipment adapted for operation under local conditions.

At the present time, chemical facilities in various regions of the country are created on the basis of identical technical means in a heat-insulated modification. Given the relatively small scale of development of the branch in eastern regions, this is economically justified. But at the present and all the moreso in the future, there is the urgent problem of implementing a technical policy that is differentiated for various zones of the nation and that presupposes the economically expedient regional classification of a number of design solutions: the establishment of the optimal size of enterprises, levels of mechanization and automation of production and methods of configuring production processes.

The future functioning of the Siberian chemical complex will to a considerable degree be associated with the development of production techniques and equipment that are characterized by high unit capacity, by a higher level of mechanization and automation processes and by low labor-intensiveness in operation. Such equipment already exists at Siberian chemical facilities. For example, the Tomsk Chemical Plant and the Tobol Petrochemical Combine are presently installing highly automated devices whose unit capacity is 2-3 times higher than similar devices at leading enterprises in the branch. In addition to other progressive technical solutions, this has a positive impact on technical and economic design indicators. Thus projected labor productivity at the Tobol Petrochemical Combine is three times higher than at "Nizhnekamskneftekhim"--the largest association belonging to the USSR Ministry of the Petroleum Refining and Petrochemical Industry.

Practice shows that in some cases, only minor improvements in mass produced equipment are needed to attenuate the impact of negative regional factors. Moreover these improvements should be made at the time the equipment is designed and manufactured and not when the production facility is activated.

The activation of chemical production facilities in Siberia is adversely affected by flaws in personnel screening and training. Many production facilities are staffed to the extent of 80-90 percent at the time they are put into operation. Siberia's relatively greater manpower shortage makes it difficult to organize the effort to supply newly built facilities with skilled manpower in good time. Siberia has at its disposal limited potential for recruiting workers in the leading occupations from existing chemical enterprises.

Siberia also experiences greater difficulty than other regions in staffing new production facilities with graduates of vocational-technical training schools since the network of the latter is weakly developed in Siberia. The possibility that new chemical facilities have to hire personnel from other branches of industry for work not directly associated with the control of production processes (auxiliary workers, clerical personnel and other categories) is also limited in Siberia. This is explained by the growing disproportion between the region's rapid industrial development which leads to a rapid increase in the number of new work places and the slower increase in labor resources. The given factors complicate the formation of stable production collectives.

It is important that the design projections contain more realistic recommendations on the screening and training of personnel for production facilities being put into operation. Accordingly, calculations of the personnel requirement must not be made according to uniform plan for different kinds of production facilities (as is frequently the case in practice) but for groups of facilities engaged in the same kind of production. Thus separate calculations must be made for facilities engaged in the production of ammonia, for facilities producing ammonium nitrate, for facilities producing caprolactam, etc. The calculations can be made according to guidelines based on the analysis of the economic effectiveness of personnel screening and training. They must regulate economically expedient times and rates of personnel recruitment, determine the skill level and share of workers to be transferred from similar enterprises and must provide for the solution of other questions.

Design recommendations will be more realistic if they reflect more accurately the demographic picture in regions in which the new facilities are sited. These recommendations must provide for concrete techniques used in assessing regional features up to and including correction coefficients for outlays on training, the beginning and end of personnel recruitment, its rate, etc., in several territorial zones. We consider it expedient to divide the USSR into the following three groups of regions (depending on the availability of labor resources, the migratory mobility of the population, and the population's mental attitudes toward working at enterprises in the chemical and petrochemical industry): the European USSR, the Ukraine, Belorussia and the Baltic republics; Central Asia, Southern Kazakhstan and the Transcaucasian republics; Siberia, the Urals, Northern Kazakhstan and the Far East. Design recommendations must be based on long-term balances of labor resources in large economic regions, krays, oblasts and autonomous republics and the territorial units comprising them.

The improvement of the system for recruiting and training personnel is a no less important question. This pertains primarily to the activity of enterprise personnel departments whose functions usually boil down to filling the manpower shortage that results from personnel turnover. As a result, their work is oriented toward the attainment of immediate results without sufficient regard to the long haul. If such an approach to the personnel problem is in some measure justified for established production facilities, it is unacceptable for new ones. High personnel turnover, which frequently affects 20-30 percent of the work force at newly activated facilities, is to a considerable degree the result of the insufficient resolution of long-term questions in personnel recruitment and training.

The resolution of problems confronting Siberia's chemical and petrochemical industry requires large-scale regional economic research that will make it possible to formulate substantiated recommendations on the siting of new capacities, on methods used in the organization of construction, on sources for supplying enterprises with skilled workers and specialists, on determining rational product mix and output volume, on regional technical policy, on environmental protection, on the use of mass produced chemical equipment and special "Siberian" equipment, etc. In our view, this research should be headed by head economic institutes of chemical ministries and especially scientific research institutes of technical and economic research of the Ministry of the Chemical Industry and the Ministry of the Petroleum Refining and Petrochemical Industry--NIITEkhim and TsNIITEneftekhim--together with the personnel of design and scientific research organizations of all-union industrial associations and scholars affiliated with academy of sciences institutes and Siberian institutions of higher learning. The time has evidently also come to create within the region affiliates of the aforementioned institutes specializing in Siberian problems. They could become coordinators of work on economic problems of development of Siberian chemistry which is presently carried out by unrelated scientific research groups.

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